

Fall 1966

1966-1967 Xavier University College of Arts and Sciences, College of Business Administration, Evening College, Graduate School Course Catalog

Xavier University, Cincinnati, OH

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CINCINNATI'S JESUIT UNIVERSITY

CATALOGUE 1966-1967

The College of Arts and Sciences
The College of Business Administration
The Evening College
The Graduate School



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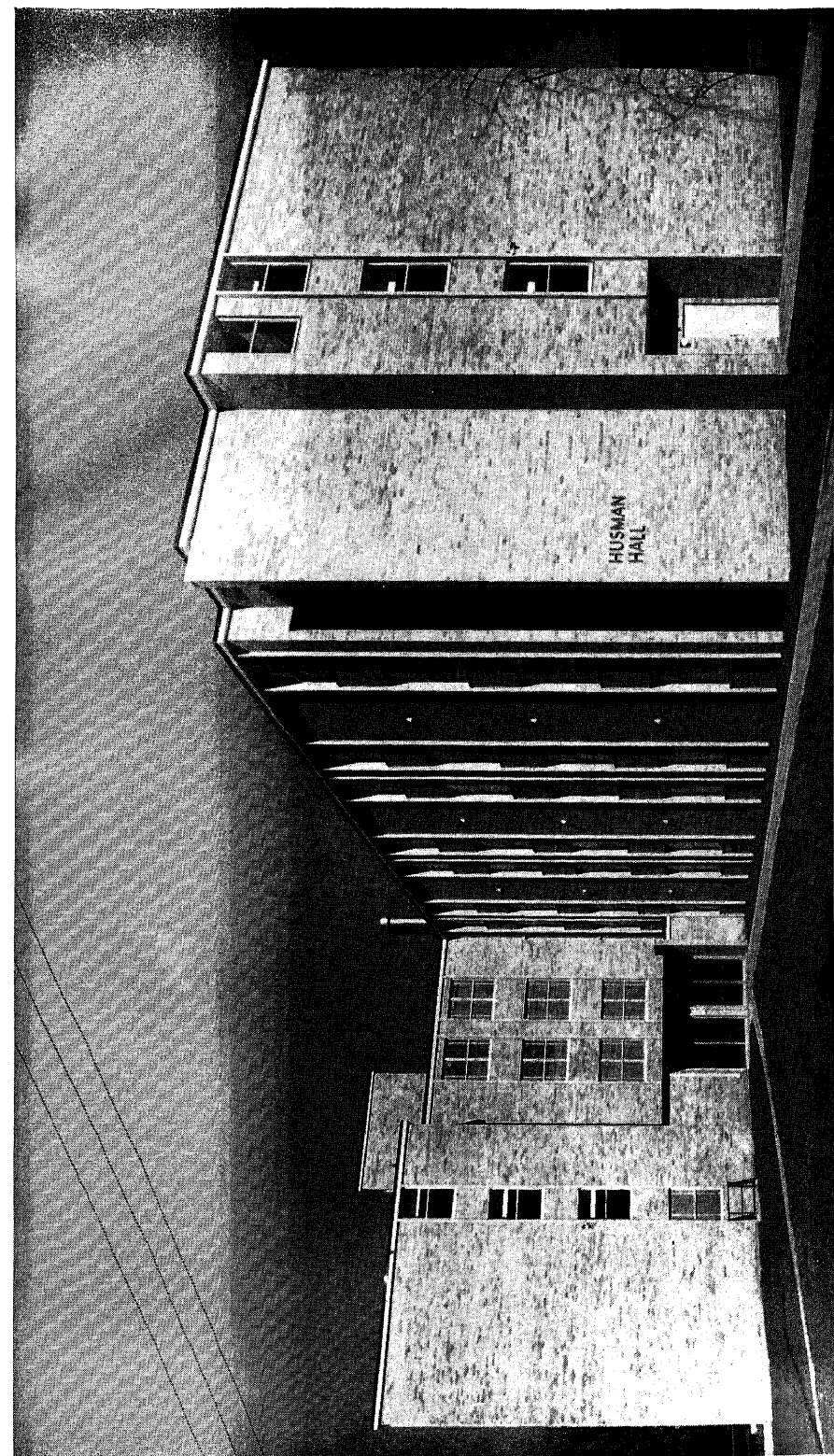
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Jesuit Educational Association Colleges and Universities

ALABAMA
Spring Hill College, Spring Hill

CALIFORNIA
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Regis College, Denver 11

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DISTRICT OF COLUMBIA
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Loyola University, Chicago 26

LOUISIANA
Loyola University, New Orleans 15

MARYLAND
Loyola College, Baltimore 10

MASSACHUSETTS
Boston College, Boston 67
Holy Cross College, Worcester

MICHIGAN
University of Detroit, Detroit 21

MISSOURI
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Wheeling College, Wheeling

WISCONSIN
Marquette University, Milwaukee 3



XAVIER UNIVERSITY

OPERATED BY THE JESUIT FATHERS

Ad Majorem Dei Gloriam



THE COLLEGE OF ARTS AND SCIENCES

— EVANSTON CAMPUS

— MILFORD COLLEGE

THE COLLEGE OF BUSINESS ADMINISTRATION

THE EVENING COLLEGE

THE GRADUATE SCHOOL

1965-1966

ANNOUNCEMENTS FOR 1966-1967

Victory Parkway

Cincinnati, Ohio 45207

Telephone 731-2341 (Area Code 513)

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1966

JANUARY							MAY							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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9	10	11	12	13	14	15	15	16	17	18	19	20	21	11	12	13	14	15	16	17
16	17	18	19	20	21	22	22	23	24	25	26	27	28	18	19	20	21	22	23	24
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30	31
FEBRUARY							JUNE							OCTOBER						
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MARCH							JULY							NOVEMBER						
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APRIL							AUGUST							DECEMBER						
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24	25	26	27	28	29	30	28	29	30	31	25	26	27	28	29	30	31

University Calendar, 1966 - 1967

First Semester

SEPT. 20, TUESDAY	Out-of-town freshmen and transfer students report to Director of Housing, 9:00 A.M. - 5:00 P.M.
SEPT. 21, WEDNESDAY	Registration of local seniors (M-Z 9:00 - 10:15 A.M. (94 or more credit hours) {A-L 10:15 - 11:30 A.M. Registration of local juniors (A-L 1:00 - 2:30 P.M. (63 to 93 credit hours) {M-Z 2:30 - 3:30 P.M. Freshmen and transfer students' Orientation begins, 9:00 A.M. All new students, local and out-of-town, are required to attend
SEPT. 22, THURSDAY	Registration of local sophomores (M-Z 9:00-10:15 A.M. (30 to 62 credit hours) {A-L 10:15-11:30 A.M. Registration of freshmen (less than 30 credit hours) alphabetically, as assigned during Orientation, 1:00 - 4:00 P.M. Registration, Graduate and Evening, 6:30 - 9:00 P.M.
SEPT. 23, FRIDAY	Registration of freshmen, as assigned, 9:00 - 11:30 A.M. and 1:00 - 3:00 P.M. Registration, Graduate and Evening, 6:30 - 9:00 P.M.
SEPT. 24, SATURDAY	Registration, Graduate and Evening, 9:00 A.M. - 3:00 P.M.
SEPT. 26, MONDAY	Registration of out-of-town undergraduate students, 9:00 - 11:15 A.M. and 1:00 - 4:00 P.M. Registration, Graduate and Evening, 6:30 - 9:00 P.M.
SEPT. 27, TUESDAY	Instruction begins, all divisions - 8:30 A.M.
OCT. 4, TUESDAY	Final day of late registration, undergraduate day colleges
OCT. 5, WEDNESDAY	Mass of the Holy Spirit, 9:00 A.M.; no classes before 4:00 P.M.
OCT. 31, MONDAY	Final date for assignment of "W" in undergraduate day colleges
NOV. 1, TUESDAY	Feast of All Saints, holyday of obligation; no classes, all divisions
NOV. 2, WEDNESDAY	Graduate School, Foreign Language Examinations, 8:00 P.M.
NOV. 5, SATURDAY	Graduate School, Foreign Language Examinations, 2:00 P.M.
NOV. 7, MONDAY	Mid-semester grades due in the undergraduate day and evening divisions
NOV. 9, WEDNESDAY	Memorial Mass for deceased benefactors, professors, alumni, 9:00 A.M.; no classes before 4:00 P.M.
NOV. 23, WEDNESDAY	Thanksgiving recess begins, 4:00 P.M., all divisions
NOV. 28, MONDAY	Classes resume, 8:30 A.M., all divisions
NOV. 29, TUESDAY	through
DEC. 13, TUESDAY	Pre-registration, undergraduate day colleges
DEC. 8, THURSDAY	Feast of the Immaculate Conception, a holyday of obligation; no classes before 4:00 P.M.
DEC. 16, FRIDAY	Christmas vacation begins after last class, undergraduate day college, except for students in Saturday classes. Graduate School and Evening College classes continue through December 17
DEC. 17, SATURDAY	Christmas vacation begins after last class for students having Saturday classes

1967

JANUARY							MAY							SEPTEMBER						
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23	24	25	26	27	28	29	27	28	29	30	31			24	25	26	27	28	29	30
30														31						

1967

- JAN. 4, WEDNESDAY... {Classes resume, 8:30 A.M., all divisions
Final date for withdrawal from courses
- JAN. 7, SATURDAY... Senior comprehensive examinations
- JAN. 13, FRIDAY... {Final date for submission of theses, first semester,
undergraduate day colleges
- JAN. 23, MONDAY... {Semester examinations, all divisions
through
JAN. 28, SATURDAY...
- JAN. 28, SATURDAY... End of first semester, all divisions
- JAN. 30, MONDAY... {First major retreat; open to all students
through
FEB. 1, WEDNESDAY...

Second Semester

- FEB. 2, THURSDAY... {Registration of local seniors {A-L 9:00 - 10:15 A.M.
(94 or more credit hours) {M-Z 10:15 - 11:30 A.M.
Registration of local juniors {M-Z 1:00 - 2:30 P.M.
(63 to 93 credit hours) {A-L 2:30 - 3:30 P.M.
Registration, Graduate and Evening, 6:30 - 9:00 P.M.
- FEB. 3, FRIDAY... {Registration of local sophomores {A-L 9:00 - 10:15 A.M.
(30 to 62 credit hours) {M-Z 10:15 - 11:30 A.M.
Registration of local freshmen {A-L 1:00 - 2:30 P.M.
(less than 30 credit hours) {M-Z 2:30 - 3:30 P.M.
Registration, Graduate and Evening, 6:30 - 9:00 P.M.
- FEB. 4, SATURDAY... {Registration, Graduate and Evening, 9:00 A.M. -
3:00 P.M.
- FEB. 6, MONDAY... {Registration of out-of-town undergraduate students,
9:00 - 11:15 A.M. and 1:00 - 4:00 P.M.
Registration, Graduate and Evening, 6:30 - 9:00 P.M.
- FEB. 7, TUESDAY... Instruction begins 8:30 A.M., all divisions
- FEB. 14, TUESDAY... {Final day of late registration, undergraduate day
colleges
- MAR. 6, MONDAY... President's Day; no classes before 4:00 P.M.
- MAR. 14, TUESDAY... {Final date for assignment of "W" in undergraduate day
colleges
- MAR. 18, SATURDAY... {Graduate School, Foreign Language Examinations,
2:00 P.M.
- MAR. 21, TUESDAY... {Mid-semester grades due, undergraduate day and
evening divisions
- MAR. 22, WEDNESDAY... {Final date for filing application for degrees to be granted
in June, 1965
- MAR. 22, WEDNESDAY... Easter recess begins after last class, all divisions
- MAR. 23, THURSDAY... {Second major retreat
through
MAR. 25, SATURDAY...
- MAR. 30, THURSDAY... Classes resume, Graduate and Evening divisions

APR. 3, MONDAY Classes resume, 8:30 A.M., undergraduate day colleges
 APR. 25, TUESDAY Graduate Record Examinations
 MAY 1, MONDAY Honors Convocation
 MAY 1, MONDAY } Pre-registration, undergraduate day colleges
 through
 MAY 12, FRIDAY }
 MAY 4, THURSDAY } Ascension Thursday, holyday of obligation; holiday for
 undergraduate day colleges
 MAY 6, SATURDAY Senior Comprehensive Examinations
 MAY 9, TUESDAY Findal date for withdrawal from courses
 MAY 10, WEDNESDAY . . Final date for submission of senior theses
 MAY 23, TUESDAY } Semester examinations, Graduate and Evening divisions
 through
 MAY 29, MONDAY }
 MAY 26, FRIDAY } Semester examinations, undergraduate day colleges
 through
 JUNE 2, FRIDAY }
 JUNE 2, FRIDAY Second semester ends
 JUNE 7, WEDNESDAY . . Commencement exercises

Summer Sessions, 1967

JUNE 19, MONDAY First summer session begins, all divisions
 JULY 4, TUESDAY Independence Day, holiday for all divisions
 JULY 28, FRIDAY First summer session ends, all divisions
 JULY 28, FRIDAY } Graduate School, Foreign Language Examinations,
 2:00 P.M.
 JULY 31, MONDAY Second summer session begins
 AUG. 15, TUESDAY } Feast of the Assumption, holyday of obligation; holi-
 day
 SEPT. 1, FRIDAY Second summer session ends

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LIBRARY. Fr. Schmidt, chairman; Fr. Burke, Dr. Cerimele, Mrs. Margaret Moore, Fr. Nieporte.

PRE-LEGAL. Fr. Tracy, chairman; Fr. Curran, Dr. Doering, Mr. Fatora.

PRE-MEDICAL. Fr. Peters, chairman; Fr. Bradley, Mr. Cusick, Dr. Garascia, Dr. Klingenberg.

RANK AND TENURE. Fr. O'Callaghan, chairman; Fr. Malone, secretary; Dr. Hailstones, Dr. Johnson, Fr. Kenney, Dr. McCoy, Mr. Walker.

REGISTRATION. Fr. O'Callaghan, chairman; Fr. Deters, Mr. Fellingner, Fr. Malone, Mr. Walker, Fr. Wheeler.

RELIGIOUS WELFARE. Fr. Oppenheim, chairman; Fr. Brueggeman, Dr. Cerimele, Fr. Daniel Foley, Fr. Thomas Foley, Mr. James

A. Glenn, Fr. Manning, Fr. Edward O'Connor, Fr. Prickril, Fr. Ratterman, Fr. Wilson.

RESEARCH AND ADVANCED STUDY. Dr. Quatman, chairman; Dr. Cerimele, Mr. Ebacher, Dr. Higgins, Dr. Werner, Dr. Wing.

SCHOLARSHIPS. Fr. Malone, chairman; Mr. Brown, secretary; Dr. Anderson, Fr. Buschmann, Dr. Dumont, Fr. O'Callaghan, Mr. Walker.

STUDENT VOLUNTEER SERVICES ADVISOR. Dr. Anderson.

STUDENT WELFARE. Fr. Ratterman, chairman; Dr. Hanna, Dr. Kearley, Fr. Malone, Fr. Prickril, Dr. Sommer.

ADVISOR ON UNDERGRADUATE STUDIES ABROAD. Fr. Felten.

Members of the Faculty

The year mentioned in parenthesis is the date of appointment.

LOUISE L. ADAMS, A.B., M.A. (1965)

Lecturer in Philosophy

SPECIALIST ROBERT C. ALEXANDER (1964)

Assistant Instructor in Military Science

ALBERT F. ANDERSON, M.Ed., Ed.D. (1963)

Assistant Professor of Education

EDWARD J. ARLINGHAUS, M.B.A. (1960)

Adjunct Assistant Professor of Business Administration

GUSTAVE K. BAHR, JR., B.S., M.S., Ph.D. (1965)

Lecturer in Physics

WILLIAM BAUGHIN, M.A. (1964)

Lecturer in History

WALTER F. BEHLER, B.S. in B.A., M.B.A., C.P.A. (1949)

Associate Professor of Accounting

ROBERT G. BENKERT, M.Ed. (1958)

Lecturer in Business Administration

REV. CLIFFORD S. BESSE, S.J., A.B., Ph.D. (1952)

Professor of Economics; Chairman, Department of Economics

VYTAUTAS J. BIELIAUSKAS, A.B., M.A., Ph.D. (1958)

Professor of Psychology; Chairman, Department of Psychology

EDWARD G. BILES, B.S., M.Ed. (1956)

Associate Professor of Physical Education; Director of Physical Education

ARTHUR G. BILLS, Ph.D. (1965)
Visiting Professor of Psychology

M/SGT. GILBERT P. BLANKENSHIP (1963)
Assistant Instructor in Military Science

WILLIAM D. BOLSEN, B.Ed., M.Ed. (1966)
Lecturer in Education

JOSEPH E. BOURGEOIS, A.B., A.M., Ph.D. (1945)
Professor of Modern Languages; Chairman, Department of Modern Languages

REV. EDWARD A. BRADLEY, S.J., A.B., M.S. (1957)
Assistant Professor of Physics

WILLIAM H. BRANNEN, B.S.B.A., M.B.A. (1963)
Assistant Professor of Marketing

REV. EDWARD B. BRUEGGEMAN,
 S.J., M.A., Ph.L., S.T.L., S.T.D. (1962)
Professor of Theology; Chairman, Department of Theology

THOMAS J. BRUGGEMAN, B.S. in Ed., M.S. (1957)
Assistant Professor of Mathematics

W. THOMAS BRYAN, B.S., M.A., Ph.D. (1953)
Professor of Business Administration

REV. EDWARD W. BURKE, S.J., A.B., M.A., Ph.L., S.T.L. (1948)
Assistant Professor of Classical Languages and English

R. ARTHUR CARVOLTH, M.B.A. (1964)
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JAMES L. CENTNER, Ph.B., M.B.A. (1955)
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BENITO J. CERIMELE, B.S., M.S., Ph.D. (1960)
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Associate Professor of Mathematics

WALTER J. CLARKE, M.A., Ed.D. (1949).
Professor of Education and Psychology

ALEXANDER COHEN, Ph.D. (1962)
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THOMAS P. COLLINS, A.B., M.S. (1960)
Lecturer in Mathematics

REV. EDWARD CONNELLY, M.S.W., S.T.D. (1956)
Lecturer in Education

REV. BRIAN W. CONNOLLY, A.B., M.A., S.T.L. (1961)
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REV. MATTHEW D. COOK, S.J., M.A., Ph.L., S.T.L. (1962)
Instructor in Classics

REV. JAMES J. CREIGHTON, S.J., M.A., Ph.L., S.T.L. (1962)
Instructor in English and Theology

MARK CUMMINGS, M.S. (1962)
Lecturer in Mathematics

REV. GEORGE A. CURRAN, S.J.,
 M.A., Ph.L., S.T.L., Ph.D. (1956-1958; 1959)
Professor of Philosophy

CHARLES J. CUSICK, B.S., M.S. (1955)
Assistant Professor of Biology

RALPH A. DAMICO, Ph.D.
Lecturer in Chemistry

KATHLEEN DAVIDOFF, M.S. (1962)
Lecturer in Mathematics

JAMES A. DELANEY, B.S., M.S. (1961)
Assistant Professor of Mathematics; Supervisor, Computer Center

MARJORIE C. DEW, A.B., M.A. (1965)
Assistant Professor of English

EDWARD A. DOERING, A.B., LL.B., LL.M., S.J.D. (1954)
Assistant Professor of English

LAWRENCE I. DONNELLY, A.B., Ph.L., M.B.A., Ph.D. (1956)
Associate Professor of Business Administration and Economics

COL. RICHARD L. DOOLEY, Ph.B., M.B.A. (1965)
Professor of Military Science; Chairman, Department of Military Science

REV. WILLIAM A. DOWD, S.J.,
A.B., M.A., B.S.S., L.S.S., S.T.D. (1958)
Professor Emeritus of Theology

HARVEY A. DUBE, B.S., M.S., Ph.D. (1947)
Professor of Chemistry

RICHARD E. DUMONT, M.A., Ph.D. (1963)
Assistant Professor of Philosophy

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CECILIA J. DWYER, A.B., M.S.W. (1964)
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Associate Professor of Modern Languages

JOHN EICK, A.B., M.A. (1965)
Lecturer in Modern Languages

HAROLD W. FAETH, JR., A.B., M.S., Ph.D. (1961)
Lecturer in Psychology

DOMINIC M. FARRELL (1954)
Lecturer in Business Administration

JEROME F. FATORA, A.B., LL.B., M.A. (1955)
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RUDOLPH FEIGE, M.A. (Berlin) (1963)
Lecturer in Mathematics

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REV. FRANKLIN C. FISCHER, S.J., M.A. (1965)
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REV. DANIEL P. FOLEY, S.J.,
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Assistant Professor of Psychology

REV. THOMAS FOLEY, S.J., M.A. (1963)
Assistant Professor of Theology

S.F.C. RICHARD J. FOREST (1962)
Assistant Instructor in Military Science

JUDITH FRANKEL, Ph.D. (1963)
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MARIUS P. GAROFALO, Ph.D. (1965)
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LEONARD C. GARTNER, A.B., LL.B. (1946)
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BERNARD A. GENDREAU, A.B., M.A., L.Ph., Ph.D., M.M.S. (1953)
Professor of Philosophy

JOHN G. GILSDORF, B.S., M.S., Ph.D. (1965)
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GREGORY G. GUZMAN, M.A. (1965)
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SIDNEY W. HALE, M.Ed., P.E.D. (1962)
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THOMAS HANNA, M.Ed., Ed.D. (1950-1951; 1963)
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PAUL W. HARKINS, A.B., M.A., Ph.L., Ph.D., LL.D. (1946)
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MARY B. HARMELING, M.A.
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*On leave, 1965-1966.

GERALD E. HARRIMAN, B.A., M.A., Ph.D. (1949)
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THOMAS R. HAUSER, B.S., M.S. (1962)
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DANIEL J. HIGGINS, B.S., M.S., Ph.D. (1965)
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RONALD A. HILVERS, A.B. (1964)
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CAPT. KENNETH A. INGRAM, B.S. (1965)
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REV. FRANCIS D. JOHNSON, S.J., A.B., Ph.D. (1961)
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REV. WALTER J. KAPICA, S.J.,
 Litt.B., M.A., S.T.B. (1957-1959; 1963)
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CARROLL C. KEARLEY, M.A., Ph.D. (1964)
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REV. THOMAS L. KENEALY, S.J., M.A. (1961)
Instructor in Theology

REV. THOMAS P. KENNEALY, S.J., M.A. (1964)
Instructor in Classics

REV. W. HENRY KENNEY, S.J., A.B., S.T.L., Ph.L., Ph.D. (1957)
Associate Professor of Philosophy; Chairman, Department of Philosophy

JOSEPH E. KHALILI, M.A. (1965)
Lecturer in History

ALBERT J. KLEE, B.Ch.E., M.S., M.B.A., M.Ch.E. (1960)
Adjunct Assistant Professor of Business Administration

ROBERT C. KLEKAMP, B.S., M.B.A. (1957)
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JOSEPH J. KLINGENBERG, B.S., M.S., Ph.D. (1949)
Professor of Chemistry

S.F.C. JOSEPH KORMANIK (1965)
Assistant Instructor in Military Science

S.SGT. MARSHALL E. KRATZER, JR. (1963)
Assistant Instructor in Military Science

EARL J. KRONENBERGER, Ph.D. (1962)
Associate Professor of Psychology

CAPT. JOHN R. KUSHNER, B.S. (1964)
Assistant Professor of Military Science

OTTO A. KVAPIL, B.S., M.A. (1957)
Assistant Professor of Communication Arts

GLEN A. LAGRANGE, A.B., M.A. (1947)
Associate Professor of Education and Psychology

WILLIAM J. LARKIN III, B.S., M.Ed., M.S., Ph.D. (1957)
Associate Professor of Mathematics; Chairman, Department of Mathematics; Director, Computer Center

ROBERT J. LAVELL, A.B., M.A. (1947)
Professor Emeritus of Education

VINNEDGE M. LAWRENCE, M.S. (1964)
Instructor in Biology

DONALD L. LEONARD, A.B. (1964)
Lecturer in Modern Languages

RUSSELL LEWIS, M.B.A. (1964)
Instructor in Business Administration

THAD P. LINDSEY, A.B., M.A. (1964)
Lecturer in English

JOSEPH LINK, JR., Ph.B., M.Ed., Ed.D., D.Sc. (Hon.) (1946)
Professor of Business Administration and Economics

REV. MAURICE E. LINK, S.J., Litt.B., M.A. (1947)
Associate Professor of History

W. W. LIPPERT, JR., Ph.D. (1965)
Lecturer in Psychology

GILBERT C. LOZIER, A.B., M.Ph., Ed.D. (1948)
Professor of Education

MAJOR JAMES E. LUNDY, B.S. (1963)
Assistant Professor of Military Science

EDGAR J. MACK, JR., M.A. (1965)
Lecturer in Communication Arts

THOMAS J. MAGNER, A.B., M.A. (1957)
Assistant Professor of Philosophy

LT. COL. EDWARD S. MAJ, B.S., M.B.A. (1963)
Assistant Professor of Military Science

REV. JOHN W. MALONE, S.J., Litt.B., Ph.L., S.T.L., Ph.D. (1955)
Associate Professor of Education; Assistant Dean, College of Arts and Sciences

HARRY R. MALY, B.S.B.A., M.B.A., C.P.A. (1959)
Assistant Professor of Accounting

FRANK L. MANELLA, A.B., M.A. (1965)
Lecturer in Sociology

*REV. FREDERICK P. MANION, S.J.,
 A.B., M.A., S.T.L., Ph.L., Ph.D. (1958)
Associate Professor of English; Dean, Milford College

*On leave, 1965-1966.

ROBERT E. MANLEY, B.S., M.A., LL.B. (1962)
Lecturer in Economics

WILLIAM MARCACCIO, B.S., M.S. (1934)
Associate Professor of Physics

JOHN MARR, A.B., M.A., Ph.D. (1961)
Associate Professor of Psychology

ALVIN C. MARRERO, A.B., M.A. (1957)
Assistant Professor of Philosophy

JAMES F. MARTIN, A.B., M.B.A. (1956)
Associate Professor of Business Administration

FRANK MASTRIANNA, B.S., M.A. (1964)
Instructor in Economics

JOHN G. MAUPIN, B.S., M.A. (1946)
Assistant Professor of Communication Arts

JAMES J. McCAFFERTY, B.S. (1957)
Assistant Professor of Physical Education

RAYMOND F. MCCOY, A.B., M.A., B.E., Ed.D. (1945)
*Professor of Education; Chairman, Department of Education;
Dean, Graduate School*

JOHN E. McDAVID, B.S.B.A., M.B.A. (1964)
*Assistant Professor of Marketing; Acting Chairman, Department
of Marketing*

WILLIAM D. McDONALD, B.S. (1964)
Lecturer in Accounting

PETER J. McDONOUGH, M.B.A. (1965)
Lecturer in Business Administration

JACK C. McELROY, A.B., M.A. (1955)
Lecturer in Psychology

REV. JOHN A. McEVOY, S.J., M.A. (1931-1934; 1965)
Assistant Professor of Theology

LEO F. McMULLIN, A.B., M.B.A. (1956)
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REV. RICHARD J. McPARTLIN, S.J.,
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RICHARD J. MEISTER, M.A. (1965)
Instructor in History

ELIZABETH MILLER, Ph.D. (1963)
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*RAYMOND E. MILLER, B.S., Ph.D. (1965)
Assistant Professor of Physics

CAPT. GREGORY W. MITCHELL, B.S. (1963)
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STAFFORD MOONEY, M.A. (1963)
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Assistant Professor of Psychology

JAMES M. MORRIS, A.B., M.A. (1965)
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HAROLD W. MORSE, M.Ed. (1963)
Lecturer in Education

PHILIP J. MORSE, B.S. (1964)
Instructor in Education

SR. MARGARET MICHELE MOTZ, S.N.D. de N., B.S.
Lecturer in Education

JOHN L. MUETHING, A.B., LL.B. (1951)
Lecturer in Business Administration

REV. CORMAN MULLEN, O.F.M., M.A. (1961)
Lecturer in English

JOHN MUNCH, B.S.
Laboratory Teaching Assistant

ROBERT J. MURRAY, A.B., M.A., Ph.D. (1960)
Assistant Professor of Classical Languages

JAMES S. NEWELL, B.S., M.A. (1965)
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DONALD NOVAK, A.B., M.A.
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*On leave, 1965-1966.

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Associate Professor of Chemistry

REV. FRANK M. OPPENHEIM, S.J., Ph.D. (1961)
Assistant Professor of Philosophy

S.F.C. CHARLES PARKS (1963)
Assistant Instructor in Military Science

REV. JOSEPH PENDERGAST, S.J., M.A., Ph.D. (1964)
Associate Professor of Classical Languages; Acting Dean, Milford College

REV. JOSEPH J. PETERS, S.J., S.T.L., M.A., M.S., Ph.D. (1946)
Professor of Biology; Chairman, Department of Biology

MARK E. PLAGEMAN, A.B., M.A. (1964)
Lecturer in Modern Languages

BORIS PODOLSKY, B.S.E.E., M.A., Ph.D. (1961)
Professor of Physics

REV. RUDOLPH A. PRICKRIL, S.J., Litt.B., S.T.B. (1957)
Assistant Professor of Sociology

GERALD QUATMAN, M.A., Ph.D. (1962)
Assistant Professor of Psychology

GEORGE RAPPAPORT, M.S. (1965)
Lecturer in Chemistry

NEAL RASMUSSEN, M.B.A. (1965)
Lecturer in Business Administration

RUTH RENTSCHLER, A.B., M.A. (1965)
Lecturer in History

DANIEL RIBAR, M.S. (1965)
Lecturer in Mathematics

PAUL J. RIESELMAN, A.B., M.A. (1948)
Assistant Professor of Modern Languages

HIGDON C. ROBERTS, JR., A.B., M.A. (1962)
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ROBERT A. RUNDLE, B.S.
Lecturer in Sociology

SR. MARY JOHN BOSCO RYAN, R.G.S., A.B., M.A., Ph.D. (1961)
Adjunct Assistant Professor of Psychology

WILLIAM E. SAUTER, M.A. (1947-1957: 1965)
Lecturer in Philosophy

REV. THOMAS G. SAVAGE, S.J., M.A. (Oxon.) (1962)
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KENNETH T. SCHEURER, M.Ed. (1963)
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GEORGE SCHLEGEL, C.P.A. (1960)
Lecturer in Accounting

REV. ROBERT W. SCHMIDT, S.J., M.A., Ph.D. (1964)
Professor of Philosophy

HOWARD G. SCHULTZ, B.S.B.A., M.A., Ph.D. (1957)
Associate Professor of Economics

VICTOR SCHURR, A.B., M.A. (1964)
Instructor in Modern Languages

ROBERT A. SCHUTZMAN, B.S.B.A., M.B.A. (1964)
Lecturer in Business Administration

ROMAN J. SCHWEIKERT, A.B., M.A. (1964)
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Lecturer in Business Administration

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CLARENCE A. SOMMER, B.S., M.A., Ph.D. (1948)
Professor of Education

LOUIS STADELMANN, S.J., M.A. (1964)
Lecturer in Modern Languages

CAPT. ROBERT M. STANBOROUGH, A.B. (1964)
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A. STEVENSON, Ph.D. (1965)
Lecturer in Psychology

RICHARD E. STRENK, B.S., M.S. (1964)
Lecturer in Mathematics

REV. PAUL D. SULLIVAN, S.J., A.B., M.A., Ph.D. (1945)
Professor of English

JOHN F. TAFURI, B.S., M.S., Ph.D. (1951)
Associate Professor of Biology

REV. THEODORE C. THEPE, S.J., A.B., Ph.L., M.S. (1961)
Instructor in Chemistry

CHARLES THIEMAN, D.B.A. (1965)
Lecturer in Business Administration

ROBERT THIERAUF, B.S.B.A., M.B.A. (1965)
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S.S.G. JOHN C. THOMAS (1964)
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A. RAYMOND TILTON, B.C.S., M.Ed. (1947)
Lecturer in Accounting

TERRY P. TOEPKER, B.S. (1964)
Lecturer in Physics

REV. HARKER E. TRACY, S.J., A.B., S.T.B., M.A. (1957)
Assistant Professor of Philosophy

REV. JOHN J. TRAINOR, S.J., M.A., Ph.L., S.T.L. (1959-1962; 1963)
Assistant Professor of Psychology

CHARLES UHL, B.S., M.S. (1965)
Lecturer in Mathematics

CHARLES W. VAUGHAN, M.Ed. (1965)
Assistant Professor of Education and Communication Arts

MATIAS G. VEGA, Ph.D. (1954)
Associate Professor of Modern Languages

ARTHUR W. VOLCK, A.B. (1946)
Lecturer in Business Administration

REV. LEO J. VOLLMEYER, S.J., A.B., M.S. (1942)
Professor of Physics

WESLEY P. VORDENBERG, A.B., M.A., Ph.D. (1965)
Lecturer in English

RUSSELL J. WALKER, B.B.A., M.A., C.P.A. (1946)
*Professor of Accounting; Assistant Dean, College of Business
 Administration*

NED WEBB, Ph.D. (1965)
Lecturer in Chemistry

THOMAS WELTER, M.S. (1965)
Lecturer in Mathematics

KARL P. WENTERSDORF, M.A., Ph.D. (1956)
Associate Professor of English

FREDERICK G. WERNER, A.B., M.A., Ph.D. (1960)
Associate Professor of Physics

MAXWELL WERNER, M.Ed. (1965)

Lecturer in Education

RUTH WERNERSBACH, A.B., M.Ed. (1964)

Lecturer in Education

JOSEPH H. WESSLING, B.S., M.A. (1964)

Lecturer in English

REV. ORRIN T. WHEELER, S.J., Litt.B., Ph.L., S.T.L., S.T.D. (1958)

Assistant Professor of Theology; Assistant Registrar

WILLIAM H. WILLER, A.B., M.A., Ph.D. (1946)

Professor of English

JAMES A. WILLIAMS, A.B., M.A. (1964)

Lecturer in Economics

REV. FRANCIS M. WILSON, S.J., M.A. (1961)

Assistant University Chaplain

EDWARD F. WILZ, B.S.B.A., M.B.A., C.P.A. (1954)

Professor of Accounting; Chairman, Department of Accounting

GEORGE A. WING, B.S.B.A., M.B.A., D.B.A. (1960)

Associate Professor of Business Administration

REV. GEORGE J. WUEST, S.J., M.A., Ph.L., S.T.L. (1961)

Instructor in Classics and Modern Languages

CHARLES ZIMMER, B.S., M.A. (1962)

Lecturer in Business Administration

OLEG ZINAM, B.S., M.B.A., Ph.D. (1958)

Lecturer in Modern Languages

Graduate Assistants

Chemistry

DAVID J. BILESKY, B.S.

LARRY DAVIS, B.S.

CHARLES S. FRIEDMAN, B.S.

STEPHEN W. HORGAN, B.S.

ROBERT J. HURTUBISE, B.S.

RONALD C. KANCZUZEWSKI, B.S.

RALPH KESSLER, B.S.

TERRENCE E. MIESLE, B.S.

RONALD L. MILAM, B.S.

JAY T. OLIVER, B.S.

ROY J. SCHUMACHER, B.S.

JOHN P. WESTENDORF, B.S.

English

THOMAS C. BRINSON, B.S.

GERALD MARX, B.S.

History

PAUL BERNINGER, B.S.

THOMAS LYNCH, B.S.

MICHAEL LAWRENCE, A.B.

Mathematics

GEORGE HEJNY, B.S.

ROBERT STRUNK, A.B.

GEORGE NIEHAUS, B.S.

DAVID TRUNNELL, B.S.

Psychology

DEWEY J. BAYER, B.S.

BERRY W. MANG, JR., A.B.

ALGIRDAS S. FEDORAVICUS, B.S.

The University

History

Xavier University was founded in 1831 as a literary institute by the great Apostle of the West, Edward Dominic Fenwick, of the Order of Preachers, who was the first Bishop of the Diocese of Cincinnati. He called his school The Athenaeum and erected buildings on Sycamore Street in downtown Cincinnati.

In 1840, his successor, Bishop John Baptist Purcell, invited the Jesuits to take over the administration of the school. They arrived on October 1, 1840, and began first classes on October 17. The Jesuits changed the name to Saint Xavier College. In 1919 the College moved to the present site on Victory Parkway in Evanston-Avon Dale. In 1930 the name was again changed, this time to Xavier University.

The College of Arts and Sciences

The College of Arts and Sciences is the heart of the Jesuit system of education. The college holds this place because it is the unit of a university wherein the distinctive purposes of Jesuit education are more fully realized. The first two years of the College of Arts and Sciences are devoted almost wholly to general education; the last two years are devoted in great measure to advanced and specialized study in fields of knowledge upon which the student wishes to concentrate. During these last two years, however, each student must devote almost one-third of his work to the study of philosophy and Christian culture, which thus climax and integrate his general education.

The College of Business Administration

After operating its business departments for many years as a part of the College of Arts and Sciences, the University established the College of Business Administration on September 1, 1961.

The College of Business Administration conforms to the general principles and objectives of the University in particular, and of Jesuit education in general. It recognizes the indispensability of cultural subjects which motivate the higher powers of the mind and spell the difference between an educated man and a mere technician.

The objectives, therefore, of the College of Business Administration are twofold: 1. The development of the cultural, the intellectual, and the moral qualities of the student; 2. Adequate preparation in areas of business administration to help the student to a position of responsibility in the business world.

Evening College

The purpose of the Evening College is to aid adults of Greater Cincinnati in obtaining a more advanced education by means of courses of cultural and practical value. This division renders particular service to those who wish to carry college work toward a degree while working during the day and to those who wish to pursue subjects which will better fit them for special services or vocations.

In addition to the liberal arts courses, technical and vocational courses are offered. All courses are open to men and women. Besides the individual course offerings, there are groupings and programs of courses leading to certificates, diplomas, and degrees.

The Graduate School

The Graduate School has offered programs leading to graduate degrees since 1947. Degrees conferred are the Master of Arts, the Master of Science, the Master of Education, and the Master of Business Administration.

Milford College

Members of the Chicago Province of the Jesuit Order pursue humanistic studies at the Milford College, a unit of the University. The faculty and the courses offered at Milford are included in this catalogue.

Objectives of Xavier University

Xavier University is an institution of higher learning set in the worldwide traditions of the Roman Catholic Church and the Jesuit Order and drawing upon the cultural heritage of the Ohio Valley. The teaching of the Church on the nature of man, his origin and destiny, and how he should use and develop his talent is central to the educational philosophy of the University. It subscribes to the expression of Pope Pius XI in his *Christian Education of Youth*, "The proper and immediate end of Christian education is to cooperate with divine grace in forming the true and perfect Christian. . . . The true Christian, product of Christian education, is the supernatural man who thinks, judges and acts constantly in accordance with right reason illumined by the supernatural light of the example and teaching of Christ."

The University strives to foster conditions favorable for intellectual leadership. To this end it strives to impart a superior body of knowledge to its students and to help them acquire power to think clearly and penetratingly. The University wants its graduates to be literate, persons of good taste, frequent and familiar in the use of books, alert, and retentive of significant ideas. These ideals are

promoted by curricular and co-curricular activities that contribute to the intellectual, the religious, the moral, and the physical enrichment of its students.

In seeking to fulfill its responsibilities, the University is guided by the principles of the *Ratio Studiorum*. This Jesuit code of liberal education, developed and revised through some four hundred years of experience, stresses the liberally educative value of mathematics and the natural sciences to teach the student to reason about the material universe. It uses language and literature to bring him into contact with new habits of thought and expression to enrich the appreciation of his own culture. History and social studies broaden his knowledge of men and events, and lead to a deeper understanding of his own role in society. And philosophy and theology help integrate the entire program of studies by the insight they afford of the total reality of God's plan for the individual and for society.

Along with general education, the University provides for concentration in special areas of learning. To the extent consonant with its resources, Xavier University fosters scholarly investigation and creative ability so that its members may contribute to mankind's quest for the fullness of truth. Its philosophy of education shapes and directs the curricula and the educational methods of Xavier University. The various programs, those in the natural sciences, business administration and pre-professional education, no less than those in the humanities, give the student a core of required, broadly educative courses so that concentration on special objectives is carried on in the context of liberal education.

In fine, Xavier University regards the development of the intellectual abilities of its students in their pursuit of truth as its specific, primary responsibility. And it sees itself sharing with the Church, the family, and other social institutions the responsibility for developing the other characteristics of the "true and perfect Christian"—strong moral character, intelligent appreciation of beauty, sound physical health, and appropriate social attitudes and habits. Jesuit education thus prepares its students for eternity as well as for time; for life as well as for vocation.

Buildings

The following buildings are used primarily for administration and classroom purposes:

Albers Hall, dedicated in 1929, is the gift of the late William H. Albers. It contains classrooms, laboratories, offices of the staffs in biology, psychology, and public relations, and the Dorothy Albers Fine Arts Room.

The Karl J. Alter Classroom Building, dedicated in 1960 to honor the Archbishop of Cincinnati, contains all major academic administration offices, 32 classrooms, four seminar rooms, faculty and student

lounges, and a studio for closed-circuit television. The Edward H. Kelley Lecture Hall seats 322 in theater-type chairs with movable tablet arms. The building is air-conditioned.

Alumni Hall, erected in 1920, is the gift of the alumni to the University on its diamond jubilee. It contains the Department of Physics, the Geoghegan Memorial Language Laboratory, classrooms, and offices of the treasurer, the bursar, and the business manager.

The Armory, completed in 1949, houses classrooms, an auditorium, a drill hall, a rifle range, storage rooms, and garages.

Saint Barbara Hall, the former Melcher residence, acquired in August, 1947, is the headquarters of the Reserve Officers' Training Corps.

Boylan Hall commemorates the memory of the late Rev. Murtha J. Boylan, S.J., professor of psychology at Xavier for many years. It houses the Assistant to the President and faculty offices.

The Walter Seton Schmidt Library Building, erected in 1926, contains the Mary G. Lodge Reading and Reference Room, the library stacks, reading rooms, and the seismological observatory.

The McDonald Memorial Library, completed in 1966, is the gift of the Walter A. and George McDonald Foundation in memory of Andrew J. and Mary McDonald. This air-conditioned building seats 700 students. The open shelves have a capacity of 350,000 volumes, and there is a closed stack area in the Schmidt Library Building for an additional 80,000 volumes. An enclosed garden area at the rear of the building provides space for future expansion of the building.

Thomas J. Logan Chemistry Building, erected in 1952-1953, is a modern science building which consists of four levels containing classrooms, spacious student laboratories, small research laboratories, dark rooms, and offices. The first level includes a loading dock and adequate storage space; the second level contains the Albert D. Cash Memorial Room.

Residence halls include the following:

Brockman Hall, a campus residence for 300 men, was dedicated in May, 1955, to the memory of the Very Rev. Hubert F. Brockman, S.J., twenty-fourth president of the University. Features of the building are the main lounge, a recreation room, group study areas on each floor, a parents' visiting parlor, and a small chapel.

Elet Hall, erected in 1924, was the first unit of the students' dormitories. It is a well-furnished student residence with accommodations for one hundred students in single and double rooms.

Elet Hall Annex, a student residence, adjoins Elet Hall.

Fisher Lodge is an auxiliary residence for the Jesuit faculty at 3828 Ledgewood Avenue, across from Brockman Hall.

Hinkle Hall, the residence of the Jesuit faculty, was erected in 1920 by Mrs. Frederick Wallis Hinkle. It contains living quarters, reception rooms, administrative offices, the switchboard, and the Foss Memorial Chapel.

Husman Men's Residence Hall, erected in 1965, was made possible by a gift from Harry J. Husman in memory of his wife, Edna D. Husman. It provides living accommodations for 292 students in four-man suites and is entirely air-conditioned. It is the first building to be erected on the new North Campus.

Marion Residence, acquired in 1942, is especially arranged for individual tutorial guidance of honor students. A special selection of students assures representation in all phases of co-curricular life. Students may live in Marion Hall only by special recommendation.

McGrath Hall, named in memory of the late Dr. Edward J. McGrath, '28, of the University medical staff, houses the University Health Service on Ledgewood Avenue.

Rattermann Hall, located at Redway and Dakota Avenues north of the main campus, was bequeathed to Xavier by the late Mrs. Henry C. Rattermann. This large English style residence provides a limited number of rooms for out-of-town students and also houses the Mermaid Tavern, the campus writers' club.

Other buildings of the University are:

The Field House and Gymnasium, erected in 1928, is the gift of Mr. Walter S. Schmidt, Class of 1905. In addition to the large indoor stadium, it contains a boxing ring, badminton and handball courts, a basketball court, and shower and locker rooms.

Xavier Stadium has a capacity of 15,000 and is floodlighted for night games. It was erected in 1928 through a public drive headed by the former Governor of Ohio, the late Myers Y. Cooper.

North Hall, 1947, contains offices of the Department of Classics, the superintendent of buildings and grounds, and the maintenance department.

South Hall, 1947, temporarily houses faculty offices.

The Union House, the former Avondale Athletic Club, now contains a lounge for Elet Hall residents.

The University Center, 1965, combines all dining and snack-bar facilities for resident and commuting students, student activity offices, the University Book Store, recreation facilities, a 500-seat theatre, and the offices of the President of the University, the Executive Vice-President, the Dean of Men, and the Director of Student Aid and Placement. Erected at a cost of more than \$2,000,000, the Center enjoys a commanding view of both Victory Parkway and the University Mall.

The Milford Novitiate Building, erected in 1925, on a one-hundred acre plot of ground in Milford, Ohio, contains the dormitories, dining hall, chapel, library, and classrooms for the young members of the Society of Jesus in residence at the Milford Division of the University.

The Williams Memorial—St. Robert Bellarmine Chapel, dedicated on December 16, 1962, is the gift of the five children of the Charles F. Williams family in honor of their parents. The Chapel, a structurally unique building in Cincinnati, is sheltered by a saddle-shell roof of reinforced concrete resting on two massive concrete piers. The design was chosen to provide a maximum of clear floor space for a semi-circular seating arrangement to accommodate 500 worshippers. The Chapel is located at the head of the Mall, making it a feature of the inner campus.

Accreditation

The University is accredited by the North Central Association of Colleges and Secondary Schools as a degree-granting institution, and is approved by the Department of Education of the State of Ohio and by the Board of Regents of the University of the State of New York. It is also approved by the American Chemical Society for its training in chemistry.

Institutional Memberships

The University maintains membership in the following educational and learned organizations:

The Jesuit Educational Association; The National Catholic Educational Association; The North Central Association of Colleges and Secondary Schools; The North Central Conference of Summer School Directors; The National Association of College and University Summer Sessions; The American Council on Education; The Association of American Colleges; The Association of Urban Universities; The National Conference of Church-Related Colleges; The Mid-West Conference on Graduate Study and Research; The National Education Association; The Ohio College Association; The Association of University Evening Colleges; The American College Public Relations Association; The American Catholic Philosophical Association; The American Catholic Historical Society of Philadelphia; The American Historical Association; The United States Catholic Historical Society; The Mississippi Valley Historical Association; The Catholic Library Association; The American Library Association; The American Association of Collegiate Registrars; The Association of Ohio College Registrars; The National Association of Student Personnel Administrators; The American Association of Colleges for Teacher Education; The American Mathematical Society; The Association of College

Unions; The National Association of College and University Food Services; The National Association of College Stores; and The United States Field Artillery Association.

Individual Memberships

The University is represented in many other associations and societies through the individual memberships of its faculty.

University Services, Financial Aid, and Organizations

Religious Welfare

Xavier University uses various means of promoting a sincere Catholic way of living in its students. Too numerous for catalogue listing, they permeate classroom and general campus atmosphere. From the elaborate celebration of Mass to a quiet visit in Bellarmine Chapel, student life is vibrant with that simple devotion characteristic of Christian principles.

Student Retreat

Each year the Spiritual Exercises of Saint Ignatius Loyola are given for all Catholic students. Attendance at the exercises is obligatory for day undergraduates.

At the same time a series of conferences on morality, character formation, and the natural virtues are given to the non-Catholic students. In none of these conferences is there anything said to disturb the religious convictions of any individual exercitant. Attendance at these conferences is obligatory for day undergraduates.

Student Health Service

The Student Health Service is the organization through which the University fulfills its obligation to its students for the care of their physical and mental health and at the same time assures itself and the families of these students that a reasonable supervision is being exercised by the institution for the maintenance of physical and mental fitness of the student.

Participation in the Student Health Service is obligatory for day undergraduates. Evening and graduate students may use some of the services.

Health examinations are required of all day students as part of their entrance requirements to Xavier University. Forms for this examination are to be filled out by the family physician and must be in the hands of the medical director of the University before the beginning of the semester in which the applicant enters the University.

Student Guidance

The University strives to give students as much individual attention as possible. Each student is assigned a faculty adviser whose

duty it is to assist the student in the planning of his course. The student is expected to have at least one conference in each semester with the adviser.

For spiritual and more personal guidance the University provides University Chaplains, who see all students according to schedule or by appointment.

The University also sponsors a Guidance Center and a Placement Service to assist the students' educational and vocational planning.

Psychological Services Center

The Center provides psychological services for students of Xavier University. It is equipped to handle behavioral problems in a variety of areas such as the choice of studies, of a school, or of an occupation; measurement of aptitudes, interests, abilities, etc.; failures in school or at work; difficulties in reading and unsatisfactory patterns of living. Psychological testing and vocational guidance, psychiatric evaluation, counseling, and psychotherapy are the fundamental services of the Center. Undergraduate full-time students are provided the testing, counseling, and vocational guidance services free, except for a \$5.00 test materials' replacement charge.

The Placement Service

The Placement Service, located in the University Center, offers assistance to seniors, graduate students, and alumni in finding suitable employment commensurate with their education. The office provides occupational materials, placement guides, company literature, the College Placement Annual, other appropriate literature, and counseling service for those seeking career positions.

The Service arranges for representatives of companies and government agencies to interview students on campus, and aids as much as possible in arranging part-time and summer employment to meet the student's financial needs or to provide suitable work experience for his proper development.

Student Housing

Brockman Hall, Elet Hall, Husman Hall, Rattermann Hall, and Marion Residence are equipped to accommodate full-time day male students. Dormitory fees are listed under Fees.

Freshmen and sophomores are required to live in the University residence halls. Juniors and seniors may, with permission of the Student Welfare Committee, live off campus.

Room reservations for the residence halls will not be held through the summer for students who are on academic probation at the end of the preceding spring term.

Libraries

The University Library, housed in the Walter Seton Schmidt Library Building since 1926, will be moved into the new McDonald Memorial Library during 1966.

The Library contains many interesting and valuable collections among which are the Williams Bible Collection; the original manuscripts of Francis J. Finn, S.J.; a fourteenth century vellum manuscript of the sermons of St. John Chrysostom; a fifteenth century antiphonary; several incunabula; letters of Andrew Jackson, Martin Van Buren, and others. Microfilm and microcard readers are available. The total number of volumes exceeds 100,000.

The University has been a constant beneficiary of friends whose contributions have increased the number of volumes. Since 1925 the Booklovers Association has been outstanding in its gifts and contributions.

With the exception of holidays, the library is open to the faculty and students from 8:00 A.M. to 10:00 P.M. on Mondays through Thursdays, from 8:00 A.M. to 5:00 P.M. on Fridays and Saturdays, and from 1:00 to 5:00 P.M. on Sundays.

The Saint Thomas Library, a branch of the University Library, is situated in Milford and is for the service of the faculty and students of the Milford Division of Xavier University. In keeping with the humanistic curriculum of this division a great part of the 36,000 volumes is in the field of English and classical literature. Very noteworthy collections of ascetical and theological works are distributed in the buildings at Milford.

Laboratories

The Albers Biological Laboratory, located on the third floor of Albers Hall, is well equipped for the training of undergraduate students in the biological sciences. In addition to standard biological laboratories, optical equipment, slides, and specimens, the Department of Biology has abundant visual aids including models, a museum, a variety of projectors, and its own library of motion pictures and kodachromes. A library room of selected reference books and journals adjoins the laboratories. A dark room and photographic equipment are available for the taking of motion pictures and photomicrographs.

The faculty of the Department of Biology has been conducting research on the electrical activity of the nervous system of lower forms for which Grass and Rahm electroencephalographs, with accessory instruments, are available. Advanced students are given the opportunity of engaging in this program of research.

The Department of Physics has one large general physics laboratory, a newly designed laboratory for advanced physics at the junior level, a newly equipped atomic-nuclear physics laboratory for seniors,

an optics laboratory, an analog computer laboratory, and a complete machine shop.

The Experimental Psychology Laboratory, on the second floor of Albers Hall, possesses materials and scientific equipment for teaching experimental methods and techniques to undergraduate and graduate students. An animal research laboratory is maintained to provide subjects for the study and investigation of perception, learning, and motivation.

The seismology laboratory, used for research in seismology, at present uses some of the facilities of the physics laboratories in addition to office, library, and dark room in Fisher Lodge. For the purpose of advancing the science of seismology, Xavier University maintains a first class station and observatory. The station is located on a farm approximately 16 miles east of the University. It is equipped with three Benioff short-period seismographs that are kept in continuous operation. In addition, an instrument vault situated in the basement of the Library Building is used for experimental purposes. The director and several students are actively engaged in an Air Force sponsored research project investigating the velocity of wave propagation and the seismic activity in the states of Ohio, Kentucky, and Indiana.

The chemistry laboratories are located in the new Logan Chemistry Building. Five large laboratories are devoted to physical, organic, analytical, general inorganic chemistry, and graduate research. There are also smaller laboratories for biochemistry, instrumental analysis, and radiochemistry. Two dark rooms and an infrared laboratory are located on the fourth level, and professors are provided with offices and research laboratories. The laboratories are constructed with walls of tile and contain emergency showers and fire-fighting equipment.

The Department of Military Science is adequately equipped for the conduct of both field work and classroom instruction. Equipment available for practical exercises by ROTC students consists of individual hand weapons. Since Xavier's ROTC unit specializes in Field Artillery, several 105mm howitzers and their associated fire direction and survey equipment are on hand. In addition, the department has available various other items or models of military equipment for training in map reading, military communications, and military missiles. Indoor instruction is often augmented and facilitated by appropriate motion pictures, slides and other graphical training aids. Other facilities include a sixteen-point small bore firing range, a military affiliate radio station, and an indoor drill and training area in the Armory. In addition, selected seniors may participate in the Army Flight Training Program conducted at a civilian Flight Training School and administered by the Department of Military Science.

The Geoghegan Memorial Language Laboratory, which was given by Miss Marie Geoghegan as a memorial to her three brothers, William A. Geoghegan, Thomas M. Geoghegan, and J. Paul Geoghegan, is located on the second floor of Alumni Hall. Equipped with thirty booths and eleven program sources, it provides supplementary drill for students who are taking any one of the modern foreign languages.

Computer Center

The University *Computer Center*, located in the Walter Seton Schmidt Building, provides a complete range of services connected with the analysis and processing of data by means of an electronic computer. These services, available to all branches of the University, may be categorized as services meeting University needs in the areas of education, research, and administration.

General computer orientation is available to the student body in lectures and demonstration periods in the Computer Center. Students can write simple FORTRAN programs after this orientation. Interested students and faculty members receive further instruction in programming in seminars offered each semester by the Computer Center staff. Facilities of the Center are also employed as a course supplement by professors in various disciplines.

Faculty and student researchers are also provided analysis, programming, and operating services in support of their projects by the Center. The high speed and accuracy of the computer is invaluable to research involving complex and extended computations.

The Center assists the administrative offices of the University in processing data. The Treasurer's office, the Registrar's office, and the Development office particularly make extensive use of the services of the Center.

The Center has the following equipment to service the computer needs of the University:

- IBM 1620 Computer with card input-output and 20,000 digits of core storage
- IBM 1311 Disk File with 2 million digits of memory storage
- IBM 407 Accounting Machine
- IBM 082 Sorter
- IBM 026 Key punch

FINANCIAL AID

Scholarships

This section on Scholarships applies exclusively to full-time day undergraduates. Some Evening College scholarships are granted directly by the Dean of that college, and students should apply to

him for these. The procedure for the granting of scholarships to graduate students is outlined under Graduate School.

The Procter and Gamble Scholarship

Xavier is one of the universities participating in the Procter and Gamble scholarship program. Each scholarship under this program covers full tuition for four years and an allowance for books, fees, and supplies, and is administered by the University.

The General Motors Scholarship

Xavier participates in the General Motors College Scholarship Plan. The amount awarded under this plan ranges from an honorary award of \$200.00 up to an award of \$2,000.00 per year, depending upon the need of the individual. This scholarship is administered by the University.

Cincinnati Catholic High Schools

A scholarship is awarded annually to an outstanding student of the graduating class of each of the Catholic high schools for boys of Cincinnati on the recommendation of the principal. The value of the scholarship, which may amount to full tuition, is to be determined by each student's financial need.

Jesuit High Schools

A scholarship is awarded annually to an outstanding student of the graduating class of each of the Jesuit high schools of the Chicago and the Detroit provinces on the recommendation of the principal. The value of the scholarship, which may amount to full tuition, is to be determined by each student's financial need.

Honors Course Scholarships

Scholarships for study in the Honors Course are offered to students who have maintained an excellent academic standing in high school. Four years of high school Latin are a prerequisite. The number of freshmen in this course is limited. For this reason the funds set aside for scholarships are normally adequate to provide partial or full tuition and, in some cases, help beyond tuition to a deserving student in a given year. The amount of the scholarship is determined partly by the academic record and partly by the real need of the applicant.

Competitive Scholarships for Greater Cincinnati

A minimum of twelve scholarships, which may amount to half-tuition, are awarded to graduates of high schools in the Greater Cincinnati area. The Greater Cincinnati area includes Hamilton, Butler, Clermont, and Warren counties of Ohio; Boone, Campbell, and

Kenton counties of Kentucky; and Dearborn county of Indiana. These scholarships are awarded by and at the discretion of the Committee on Scholarships at Xavier University on the basis of scholastic excellence and financial need.

Competitive Scholarships Outside Greater Cincinnati

A minimum of twelve scholarships, which may amount to half-tuition, are awarded to graduates of high schools outside the Greater Cincinnati area. The scholarships are awarded by and at the discretion of the Committee on Scholarships at Xavier University on the basis of scholastic excellence and financial need.

Instructions for All Applicants

Applicants for scholarships shall have completed all the requirements for admission to the University before being considered for a scholarship. Moreover, they must submit a Parents' Confidential Statement. This should be done by March 1.

Letters concerning scholarships should be directed to:

The Secretary

The Committee on Scholarships

Xavier University

Cincinnati, Ohio 45207

Scholarship Regulations

1. A scholarship applies to tuition only and does not excuse the designee or holder from payment of other fees.
2. Scholarships must be accepted for the year or years they are awarded. They may not be transferred by the holder and may not be resumed at will after having been relinquished.
3. The scholarship will be awarded for one year and will be renewable in favor of the holder for each successive semester of his four-year college period.
4. Holders of honor scholarships must maintain a quality-point ratio of at least 2.5 in the freshman year, and 3.0 in the sophomore, junior, and senior years.
5. The award in all cases is made by and at the discretion of the Scholarship Committee of Xavier University.
6. Holders of honor scholarships are expected to participate in the co-curricular activities of the University.

Source of Scholarship Funds

Listed below are the permanent scholarships that have been generously given to Xavier University in the past. The income from these scholarships is increased each year by gifts of annual scholar-

ships. In addition, the University uses funds from its current income to make up the balance of these awards.

Perpetual Scholarships

William F. Poland, S.J., Fund, about 1906, approximately \$115,000

Fr. Poland established this fund from his patrimony at the time of the death of his parents.

Elizabeth Sullivan Scholarship, 1924, \$3,000

Mary B. Shannon Scholarship Fund, 1925, \$13,334

Worpenberg Family Scholarship, \$5,000

This is a partial scholarship to be awarded preferably to a graduate of Saint Xavier High School.

Rev. James D. Foley, S.J., Scholarship, (in his honor) \$2,000

Mary Mohlenhoff Scholarship, (in memory), \$2,000

Passion Play Scholarship, 1928, \$500

The Ryan Sisters Scholarship, \$3,000

Siedenberg-King Scholarship, \$2,000

Margaret Shea Scholarship, 1937, \$3,500

Archbishop McNicholas Memorial Scholarship, 1940, \$5,000

Mrs. F. W. Hinkle Memorial Scholarship, 1940, \$5,000

The Ryan Sisters Memorial Scholarship, 1940, \$5,000

Saint Xavier Church Memorial Scholarship, 1940, \$5,000

The four preceding scholarships were given on the occasion of the Quadricentennial Observance of the foundation of the Society of Jesus and the Centennial of the Jesuits in Cincinnati.

Rev. James McCarthy, S.J., Scholarship, 1942, \$3,468

This partial scholarship is to be given to a needy and deserving student in honor of Fr. James McCarthy, S.J. It was donated by the will of Mrs. Clara Pressler.

Xavier Student Council, 1942, \$2,087.47

The proceeds from a World War II metal scrap drive conducted by the Student Council were donated for this scholarship.

Bernard H. Ludwig Scholarship, 1948, \$2,000

A partial scholarship to be given preferably to some member of Saint Augustine's Parish, to be selected by the pastor of Saint Augustine's, Cincinnati.

Charles A. Clagens Scholarship, 1949, \$3,576

A partial scholarship for any worthy poor student, preference to be given to a student of Saint Peter's Roman Catholic School, New Richmond, Ohio.

Blessed Virgin Mary Scholarship, \$5,000

A partial scholarship established by an anonymous donor in honor of the Blessed Virgin Mary.

Rev. Albert Dierkes, S.J., Scholarship, \$6,400

A partial scholarship established by an anonymous donor in memory of Fr. Dierkes.

Fred Tuke Scholarship, 1951, \$10,000

A donation by Mr. Fred Tuke provided a full tuition scholarship.

Walter A. and George McDonald Fund

This fund, established in 1960 to honor Mr. and Mrs. Andrew J. McDonald, provides income for a graduate assistant in the Department of Chemistry.

Walter A. and George McDonald Scholarship, \$1,000.

Dr. Edward McGrath Scholarship, 1956

A partial scholarship donated in memory of Dr. McGrath.

Lillian W. Ochs, \$250

Class of 1931 Scholarship, 1956, \$7,500

A half-tuition scholarship donated by the Class of 1931 on the occasion of the twenty-fifth anniversary of their graduation.

The Stephens L. and Margaret J. Blakely Scholarship, 1958

A tuition scholarship maintained by the annual contribution of Mr. John R. Blakely and Mrs. Jane B. Woodrough in honor of their parents. The scholarship is awarded to a pre-law student from Kenton County, Kentucky.

The Jesse K. Dunn Memorial Scholarship Fund, 1959, \$7,000

The Frederick A. Hauck Physics Research Scholarship, 1962, \$1,500 annually

This is an award to a student (or students) selected by the Department of Physics to pursue, on the undergraduate level, research projects commensurate with his (or their) intellectual promise.

The Matthew Ryan Family Scholarship, 1964, \$10,000

Given at the request of the late Miss Margaret Ryan.

The Fredin Memorial Scholarships, 1964.

These are annual awards for one or more students to pursue their studies in French in France. Established from the bequest of Mlle. Aline Fredin in memory of her parents.

The Chaswil Foundation Student Loan Fund

The Chaswil Foundation Student Loan Fund has been established by the late Sir Charles F. Williams to assist students in the undergraduate division. Students enrolled in the undergraduate day division of Xavier University are eligible to apply for loans after the completion of their first semester. In any one calendar year, a student can borrow up to one-half of his tuition and fees, or \$200.00, whichever is less. The loan is interest free. The recipient will be required to pay back a minimum of \$200.00 of the total amount borrowed, during each calendar year after he leaves Xavier University, whether by graduation or for any other reason.

The Lichter Foundation Loan Fund

The Lichter Foundation Loan Fund was established in 1955 through the generosity of Mr. Jacob Lichter of Cincinnati. Students enrolled in any division of Xavier University are eligible to apply for a loan after the completion of their first semester. The maximum to be borrowed in a particular case will be determined by the Committee on Scholarships. The recipient of a loan will be expected to pay back the money at his earliest convenience. The notes will begin to bear interest at the rate of 3% per annum, payable semi-annually, one year after the recipient leaves Xavier University, whether by graduation or for any other reason.

Government Loan Fund

The National Defense Education Act of 1958 provides for the creation, at American colleges and universities, of loan funds from which needy undergraduate and graduate students may borrow for the completion of their higher education. Recipients are selected by the school itself.

The borrower must be a full-time or half-time student, in need of financial aid for his education, and capable of maintaining good academic standing. An undergraduate may borrow up to \$1,000.00 in one year but not over \$5,000.00 in his entire course of higher education. A graduate student may borrow, on the same basis and on the same repayment plans as the undergraduate, up to \$2,500.00 per year but not to exceed a total of \$10,000.00, including any undergraduate loans he may have incurred.

Repayments begin on a monthly or quarterly basis as determined by the University within nine months after the borrower ceases to be

a full-time or half-time student. These loans carry a 3 percent interest on the unpaid balance during the repayment period. The loan must be repaid in accord with the terms specified in the promissory note. Under no conditions may the repayment period exceed 10 years. The Act as amended requires that special consideration be given to superior students. For further details, communicate with the Treasurer's Office, Xavier University.

The Tuition Plan

The Tuition Plan is a convenient way to meet tuition and fees through monthly payments. Under this system, payments are spread out over eight monthly instalments if the contract is for one academic year's expenses, or over the entire year if the contract is for two, three, or four years' schooling. Any qualified parent under 60 years of age who uses the two, three, or four year plan is covered automatically by Parent Life Insurance, at no additional expense. The insurance provides for the payment of the remaining costs covered by the contract, upon the death of the parent who signed the contract.

Cost:

- One year plan —4% more than the cash price of tuition and fees for one year.
- Two year plan —5% more than the cash price of tuition and fees for two years.
- Three year plan—6% more than the cash price of tuition and fees for three years.
- Four year plan —6% more than the cash price of tuition and fees for four years.

For details on the Tuition Plan write: Treasurer's Office, Xavier University, Cincinnati, Ohio 45207.

Education Funds Incorporated

Education Funds Incorporated offers a convenient way to meet the cost of tuition and fees through monthly payments. Both parent and student are covered automatically by life insurance, which provides for the payment of the remaining cost covered by the contract in the event of the death or permanent disability of the parent, or repayment of the contract in the event of the death of the student. Interest rates are reasonable.

Payment plans:

One year plan covers tuition and fees for one year, payable in eight or twelve monthly installments.

Two year plan covers two years' expenses—24 monthly payments.

Three year plan covers three years' expenses—36 monthly payments.

Four year plan covers four years' expenses—40 or 48 monthly payments.

For details, communicate with the Treasurer's Office, Xavier University.

The College Work-Study Program

In the Economic Opportunity Act of 1964, Government funds are made available to colleges and universities for part-time work, usually on campus, for students from low income families. Applicants should be nationals (citizens) in need of the earnings to meet their college expenses, should have good academic standing, and should carry a normal (full-time) number of academic course hours. Under this program students may work up to 15 hours per week when their classes are in session and not more than 40 hours per week in vacation periods or during the summer when not enrolled in classes. Whenever possible, Work-Study jobs will be co-aligned with the student's course of studies to give the most valuable educational experience.

Xavier University participates in this program. For details communicate with the Treasurer's Office, Xavier University.

Awards

The Benjamin Bernstein Award. This award of \$100, offered by Mr. Benjamin Bernstein, partner of Touche, Ross, Baily, and Smart, is given to a student majoring in accounting who indicates aptitude in public accounting and whose scholarship in accounting and in over-all average is highest at the completion of his junior year.

The Cincinnati Chapter, National Association of Accountants Manuscript Writing Awards. These awards of \$25, \$15, and \$10 are granted students submitting the best manuscripts on subjects of working interest to the accountant in industry.

The Ervin A. Stadler Accounting Award. An award of \$100 is offered by Mr. Ervin A. Stadler, resident partner of Haskins and Sells, to the student majoring in accounting who attains the highest cumulative average in scholarship and accounting at the completion of his sophomore year and is a member of the Accounting Society.

The Haskins and Sells Foundation Scholarship Award. The Haskins and Sells Foundation has established an annual award of \$500 for the senior with an aptitude for public accounting and with the highest cumulative average in scholarship, accounting, and English at the completion of his junior year.

Financial Executives Institute, Cincinnati Chapter, Award. The sum of \$50 is given to the senior majoring in accounting whose scholastic standing, leadership, and participation in co-curricular activities are exceptional.

The Cincinnati Controllers Institute of America, Inc. Award. A plaque is awarded at the annual educational meeting to a senior majoring in accounting. The student is selected on scholastic standing, leadership, and participation in co-curricular activities.

The Dr. J. T. Clear Biology Key. This key, founded by Dr. J. T. Clear, is awarded annually to the member of the Xavier Biological Society who has completed his major in the Department of Biology with the highest distinction.

The Dorst Chemistry Key. This key, the gift of Arno A. Dorst, is awarded annually to the senior who has completed his major in the Department of Chemistry with the highest distinction.

The Arno Dorst Cash Award. This prize was established in 1958 in memory of the Cincinnati business and civic leader by the Honorable Edwin G. Becker. The award of \$200 will be made to a senior in Business Administration whose scholarship, co-curricular activities, and personal attributes indicate promise of leadership in business.

The Intercollegiate English Prize. A purse of \$100 is offered yearly by Mr. David F. Brenner of Chicago for excellence in English essay writing. The competition includes the Jesuit colleges and universities of the Chicago, Missouri, Detroit, and Wisconsin Provinces.

The Alumnae English Prize. This prize is given by the Xavier University Alumnae Association to the student winning the highest place in the Intercollegiate English Contest.

The Sweeney English Award. A cash prize of \$25.00 is given in memory of Thomas and Anthony Sweeney to the student completing his major in English with the highest distinction.

The Mermaid Tavern Prize Key. A gold key is offered by Mr. Anthony C. Elsaesser, '12, to the Tavern member meriting highest distinction in literary composition and criticism.

The Catholic Poetry Society of America Award. This award is given for an original poem judged superior by the Department of English.

Athenaeum Prize Keys. Two gold keys are given to authors of the best contributions by undergraduate students to the *Athenaeum* literary magazine as judged by members of the Department of English.

Xavier Fourragere. This military decoration is presented to ROTC students as an honor for military attainment.

The American Marketing Association Award, Cincinnati Chapter. An award of memberships and subscriptions valued at \$25.00 is made to the senior who has been outstanding in the study of marketing.

The Kramer-Miller Mathematics Award. An award of \$50 is made to the senior majoring in mathematics who has distinguished himself in his studies and has shown the greatest progress in mathematics.

The Mathematics Department—Pi Mu Epsilon Award. An award of \$20 presented by the Mathematics Department and the Ohio Theta Chapter of Pi Mu Epsilon, national honorary mathematics fraternity, to the student in mathematics exhibiting excellence in problem competition sponsored by the Department.

The Military Order of World Wars Medal. The Cincinnati Chapter of The Military Order of World Wars presents a gold medal annually to the outstanding ROTC cadet of the First Year Basic Course.

The Reserve Officers Association of the United States, Cincinnati Chapter. Four medals are presented annually by this association to cadets of the ROTC. A gold medal is awarded to the outstanding cadet in the Second Year Advanced Course and a silver medal to the outstanding cadet of the First Year Advanced Course. Similar bronze medals are awarded to cadets of the First and Second Year Basic Course for excellence in scholarship and proficiency as cadets.

The Xavier University R.O.T.C Rifle Club Award.

The Disabled American Veterans' National Headquarters Award.

The Hamilton County Chapter of Catholic War Veterans' Award.

The Combined Councils, Knights of Columbus Award.

The Jewish War Veterans and Auxiliary Award.

The Cincinnati Chapter of the Sons of the American Revolution Award.

The Association of the United States Army Medal.

The ROTC Bandsman Award.

The American Legion, Fourth District Award.

The Chicago Tribune Award.

The Cincinnati Post and Times-Star Award.

The Veterans of Foreign Wars Award.

The Colonel Charles F. Williams' Scholarship and Prize. A gold medal and a \$200 scholarship are offered annually in memory of Colonel Charles F. Williams to the First Year Advanced Course student who ranks highest in scholarship.

The American Citizens' League Award. An award of \$25.00 is offered by the American Citizens' League of Cincinnati to the student who attains the highest scholastic average in German for the academic year.

The Heidelberg Club German Award. A gold medal is given to the student in the upper division courses who attains the highest

score in a test in German administered by the Department of Modern Languages.

The Francis I. Hamel Prize in Psychology. A book prize established by Dr. and Mrs. Ignatius A. Hamel in memory of their son, Francis I. Hamel, is awarded to a junior majoring or minoring in psychology who has demonstrated excellence in achievement in psychology and who is outstanding in his over-all academic work.

The Mrs. Magdalena Strobl Link Psychology Award. An award of \$50.00 established by Dr. Joseph Link, Jr., in memory of his mother, Magdalena Strobl Link, is given to the best graduating psychology senior. The recipient is selected by the Department of Psychology on the basis of his over-all performance, his performance in psychology, and his achievement on the Graduate Record Examination or the Miller Analogies Test.

The Alpha Sigma Nu Religion Key. A gold key is awarded annually by the Xavier Chapter of the National Jesuit Honor Society to the freshman or sophomore who writes the best essay on a religious topic.

The Intercollegiate Latin Prize. The Very Reverend Provincials of the Midwest Jesuit Provinces offer a prize of \$100 annually (\$50 for the first prize, \$30 for the second, and \$20 for the third) for the best translation of classical English and classical Latin. The contest is open to students of the Jesuit liberal arts colleges in the Chicago, Missouri, Detroit, and Wisconsin Provinces.

The Ragland Latin Medal. A gold medal, founded in 1935, in memory of Alice D. Ragland, is awarded to the participant who ranks highest in the Intercollegiate Latin Contest.

The Washington Oratorical Medal. A gold medal is offered by the Xavier University Alumni Association for the best original oration delivered in the annual contests in oratory.

The Joseph A. Verkamp Prize Award for the Study of Greek. To encourage the study of Greek, Mr. Joseph A. Verkamp, '07, founded in 1964 an annual award of a Greek Lexicon to the student who excels in Greek in the judgment of the Department of Classics.

The Joseph B. Verkamp Medal. A gold medal is established by Mr. Joseph B. Verkamp, '77, for award to the member of the Poland Philopiedian Society who has delivered the best speech in the annual public debate of the society.

The Tau Kappa Alpha—National Honorary Society Speech Fraternity Keys. The Delta Sigma Rho-Tau Kappa Alpha Keys are awarded to students selected as members of the National Honorary Forensic Fraternity for their excellence in debate.

The Robert G. McGraw History Medal. This award is made to the student judged by the Department of History to excel in the study of history.

The Archbishop McNicholas Medal. A gold medal is offered in memory of the Most Reverend John T. McNicholas, O.P., D.D., to that member of the senior class who has excelled in the study of philosophy.

The Martin G. Dumler Key. A key is offered by Mr. Martin G. Dumler, LL.D., to that member of the junior class who has excelled in the study of philosophy.

The David Snyder Religion Medal. A gold medal, founded by Mr. and Mrs. John W. Snyder, Portsmouth, Ohio, in memory of their son, David William Snyder, '31, is awarded for the best catechetical essay written by a junior or senior.

The Religion Key. An award offered by the University Sodality to the student who excels in the subject of Theology.

Evening College Awards

The Evening College Honor Award (First Prize \$50.00) is awarded to the freshman or sophomore student who attains the highest scholastic average in a degree or certificate program.

The Evening College Honor Award (Second Prize \$25.00) is awarded to the freshman or sophomore student who attains the second highest scholastic average in a degree or certificate program.

The J. D. Cloud Accounting Award. This prize of \$100.00 is awarded to the student of the Evening College in the senior accounting class attaining the highest average for his third and fourth years' work.

The Xavier University Alumnae Association Scholarship Award. This award of \$50.00 applicable toward tuition, is presented to the alumnae member in good standing enrolled in a certificate or degree program whose average for the year is highest.

The Accounting Award of the Cincinnati Chapter, American Society of Women Accountants. This award of \$25.00 is granted to a woman student in the Evening College for excellence in the study of accounting.

The Cincinnati Industrial Advertisers Award. A \$50.00 savings bond will be awarded to the student conceiving and designing the best advertising campaign at the Evening College.

The Cincinnati Chapter, National Association of Accountants Manuscript Writing Awards. These awards of \$25, \$15, and \$10 are granted students submitting the best manuscripts on subjects of working interest to the accountant in industry.

Student Government

The purpose of student government at Xavier University is solely educational. Its goal is twofold: first, to develop a sense of individual and group responsibility for common ideals, and, secondly,

to demonstrate through actual living experience the techniques of attaining those goals through group self-organization and self-government.

Student Organizations

Xavier University provides many forms of student activities and organizations for the purpose of promoting religious, social, academic, and cultural relations among the student body. All organizations of students are under the general supervision of the Student Welfare Committee. Approval for meetings and programs must be secured from them directly or through the appointed faculty moderators. With the exception of activities and organizations of a purely religious nature only such students as are free from disciplinary censure and the scholastic censure of probation are eligible for active membership. The University reserves the right to discontinue or moderate any student activity or organization. By means of its committees and agencies the University also has the right to limit the extent and degree of the individual student's participation.

Religious Activities

The following activities offer students the opportunity to enrich their religious development:

The Apostleship of Prayer is a world-wide organization of which there exists in the University a distinct and duly-established local chapter. Membership is open to all students. The object of the association is the fostering of a manly and practical devotion to the Sacred Heart of Our Lord and His interests in the world, and the actual practice of the law of universal charity through mutual prayer for the intentions of all associates.

Sodality of the Immaculate Conception. The sodality was established and affiliated to the *First Sodality* in Rome on December 8, 1841. Its purpose is to promote a special and filial devotion to the Immaculate Mother of God, to imitate her virtues, and to encourage, both by word and example, an eminent purity of morals and a manly fidelity to the practices of religion. A residence for sodalists is maintained at 776 North Crescent Avenue.

Academic-Cultural Groups

The organizations that further the students' academic and cultural development are these:

The Xavier Accounting Society, organized in 1947, has as its prime objectives the broadening of knowledge and the deepening of interest of its members in the field of accounting; the promotion of mutual helpfulness and the fostering of fellowship in the pursuit of this worthy aim.

The Alchemysts Club, a student affiliate chapter of the American Chemical Society, furthers students' interest in chemistry. Together with the chemistry clubs of other Catholic colleges of Greater Cincinnati, it forms the Albertus Magnus Chemistry Club.

The Musketeer Band. The band promotes student interest in music, stimulates spirit at football and basketball games, gives concerts, and provides music for R.O.T.C. Corps Day formations and special University functions.

The Biology Club, open to students of biology, sponsors original investigation in the field.

The Xavier University Clef Club makes numerous concert appearances, entertains at University functions, and makes several radio broadcasts throughout the year. Two hours each week are given to vocal culture and the study of musical theory and interpretation.

Economics Club. Undergraduates interested in economics have banded together for further discussion of this subject.

The French Club, le cercle Francais de Xavier promotes interest in French affairs and in the history, the literature, the art, and the customs of France.

The Heidelberg Club fosters an interest in the history, culture, and language of the Germanic people.

The Investment Club has limited membership and is designed to promote an understanding of security selection and investment management. Members regularly commit monthly does to the purchase of securities.

The Jazz Club presents jazz programs on campus and on the University and other radio stations.

The Xavier University Marketing Club. This organization, founded in 1963, supplements the students' classroom activity by inviting outside speakers and by orienting the members toward opportunities in the field.

The Masque Society of Xavier University stages plays during the academic year, and affords its members an opportunity to take part in phases of play production—acting, directing, stagecraft, lighting, and scenic design.

The Mathematics Club promotes scholarly development by interesting its members in pure and applied mathematics.

The Mermaid Tavern is a writers' club of limited membership and promotes the association of graduates and undergraduates actively interested in writing. *The Tavernacular*, a privately circulated magazine, is issued quarterly.

Pershing Rifles: Company G-1, a member of *The National Society of Pershing Rifles*, is a voluntary association of college students enrolled in basic courses in military science. Its purpose is to en-

courage, preserve, and develop the highest ideals of the military profession and to promote American citizenship. Company G-1 competes against drill teams from other universities at drill meets held at various locations in this part of the country. The company drills intensively and has developed a noteworthy *esprit de corps*. Elected Pershing Rifles members of the Advanced Course command the unit and administer its affairs. Any Basic Course student capable of passing certain tests is eligible for membership in the Pershing Rifles. Members wear the blue and white fourragere on the left shoulder of their R.O.T.C. uniforms.

The Xavier Philosophy Club fosters in its members greater interest in philosophical subjects. Meetings are informal and free discussion is encouraged.

The Physics Club is pledged to the purpose of increasing the interest of its members in physics.

The Poland Philopedian Society, the oldest campus organization, was founded in 1840. Besides regular intercollegiate debates, it sponsors the annual Robert S. Marx Debate Tournament, which brings teams from twenty-three colleges and universities to a competition at Xavier.

The Political Forum. Members participate as Young Democrats and Young Republicans, and invite governmental figures to discuss theoretical and practical politics.

The Psychology Club provides opportunity for students to increase their knowledge of psychology and to participate in extra-curricular work in this field.

The Society for the Advancement of Management. The University Chapter prepares Xavier men for business careers through seminars, conferences, and management development programs.

The Spanish Club encourages its members to learn more about the Iberian language and customs and the literature of Hispanic countries.

The St. Thomas More Pre-Law Society was founded in 1963 by the Xavier University Pre-Legal Committee for students interested in a career in the legal profession. Its program affords its members, in addition to the guidance of the Pre-Legal Committee, the counsel also of law school deans, professors, and students, of members of the local judiciary and bar, and especially of members of the Natural Law Society.

The Student Fine Arts Committee cooperates with the University Fine Arts Committee in developing interest in music, painting, and sculpture.

The Student Speakers' Bureau provides student speakers for appearances before clubs and civic organizations.

The Student Tutoring Society aids undergraduates who encounter difficulties in meeting scholastic standards.

Student Volunteer Services, organized in 1965, involve students in volunteer projects at the local level and in such organizations as the Peace Corps, the Papal Volunteers, Extension, and VISTA. The organization works closely with Chabanel House. Projects include tutoring, direction of recreation, trips to Appalachia, and other activities of social and civic significance.

WCXU, the Xavier radio station, presents music, news, and sports sixty hours a week from its studio in the Alter Building. The Student Council owns the station, and students in Communication Arts staff it. It operates on 660 k.c.

Social and Service Clubs

Other organizations that afford students the opportunity for recreation and useful activity include the following:

The Xavier University Bridge Club was organized in 1959 under a franchise from The American Contract Bridge League. Its activities include monthly duplicate tournaments, invitational tournaments with other schools, and the sponsorship of bridge classes.

The Cheerleaders organize cheering at games and rallies.

The Dormitory Council consists of representatives of residents of the University halls, and promotes the spiritual and social welfare of the dormitory students.

The Xavier ROTC Radio Club maintains a station operating in the amateur bands and as part of MARS—the Military Affiliate Radio System. Students receive instruction necessary for earning operators' licenses.

The ROTC Rifle and Pistol Club practices marksmanship under the direction of a member of the Department of Military Science. The teams participate in intercollegiate competition throughout the Mid-West.

The Sailing Club participates in intercollegiate regattas as a member of the Midwest Collegiate Sailing Association. Its home port is Lake Cowan.

The Student Directory is compiled annually by undergraduates working under the direction of the Dean of Men.

The Xavier University Council of the Knights of Columbus (No. 4509) was established, and its first class was initiated in February, 1958. The Council maintains a residence for out-of-town members.

Regional Clubs

To promote fellowship among dormitory students the University encourages regional clubs. At present these are the following:

<i>The Chicago Club</i>	<i>The Hamilton Club</i>
<i>The Cleveland Club</i>	<i>The Indianapolis Club</i>
<i>The Detroit Club</i>	<i>The Kentucky Club</i>
<i>The Fort Wayne Club</i>	<i>The Toledo Club</i>

Evening College Clubs

The Family Relations Club of the Catholic Colleges of Greater Cincinnati has a dual purpose: (1) to develop and strengthen in the members the right and wholesome attitude toward Christian marriage and family life, and further a true appreciation of the dignity and beauty of the Christian home, as well as the privilege of duties and obligations involved; (2) to offer the community a clear interpretation of the Catholic position on marriage and the family, and an authoritative refutation of erroneous views relative thereto. Student and guest speakers participate in the regular monthly meetings. The apostolic work of the club is carried out by utilizing "a work shop technique" in four committees on the following activities: public speaking, radio and television presentations, writing, research, surveys, arranging pre-Cana conferences for engaged couples, and sponsoring Christian recreation in the home, school, and parish. Members are trained in these various works by experts in these fields.

The Masque Society of Xavier University.

The Society for the Advancement of Management.

The Xavier Accounting Society.

The Xavier University Alumnae Association. Any woman student who has acquired thirty or more credits in residence is eligible for membership. The group was founded in 1926 and is affiliated with the International Federation of Catholic Alumnae.

Night Side of the News. Evening Division students who are interested in journalistic pursuits and creative writing are invited to join the news staff of the *Night Side of the News* which maintains one page of the *Xavier University News*. Besides the actual reporting and news writing, the staff also participates in the various social functions of the *Xavier University News* staff.

Intramural Athletics

Intramural programs are carried on in a variety of sports for the benefit of undergraduates who do not participate in varsity competition. Such activities are carried on in baseball, basketball, bowling, handball, touch football, and other sports.

Intercollegiate Athletics

Xavier University believes that there are sound values in intercollegiate athletic competition and that it has a valid place in American education. Intercollegiate athletics, therefore, are conducted at Xavier to further the education of the students physically, emotionally, intellectually, and morally. Participants learn the value of cooperative effort and the necessity of subordinating their own good to that of the group. They also see the need for poise and for competence in the face of opposition, and they learn a sportsmanlike respect for rules.

Intercollegiate rivalry also benefits the student body by providing wholesome recreation and the opportunity for the undergraduates to show their loyalty to all phases of the University's program. Students gain the educational value of sharing in group activity, and also learn to respect the rules as sportsmen.

The program of intercollegiate athletics at Xavier includes basketball, baseball, football, golf, sailing, tennis, and occasional sports. These activities are administered by the moderator of athletics, who is advised by the Athletic Board and who is ultimately responsible to the President of the University.

Participants in intercollegiate athletics, as in other co-curricular activities, must be *bona fide* students in good standing. They will have entered the University in accordance with the admission norms published in the Catalogue and will be subject to the regular scholastic demands. If, in the judgment of the dean, their participation in athletics interferes with their progress toward a degree, he may forbid them to continue even though they are not formally on scholastic probation.

Xavier Publications

Primarily intended as a source of information for the Xavier family, these publications offer special opportunity to students who wish to learn news writing, editing, and creative literary expression.

The Athletic Review, published by the Department of Public Relations, is the official program for all home football and basketball games, and carries illustrated up-to-the-minute news about the Musketeers.

The Musketeer, the official yearbook of the University, is a student edited and managed publication distributed shortly before the commencement exercises in June. Intended as a permanent record of student life at Xavier, *The Musketeer* presents in colorful pageantry a panorama of the various school events, social functions, athletics, and campus organizations.

The Athenaeum, a literary magazine that dates from the old college, is intended to foster literary effort among students. The staff is composed of honor students in English.

The Xavier Alumni Newsletter combines campus news with news about Xavier men and women everywhere. It is published by the Department of Public Relations.

The Xavier University News. Xavier University is the publisher of *The Xavier University News*. As publisher the University operates through a faculty adviser who is ultimately responsible to the President and who seeks to achieve the purposes of the publication through a program of pre-publication leadership and guidance as well as post-publication review and critique. The judgment of the adviser on the acceptability of material for publication is final.

Honor Societies

Alpha Sigma Nu. A chapter of this national honor fraternity for students of Jesuit colleges and universities was established at Xavier in 1939. Candidates for membership, chosen during their junior or senior year or from the Graduate School, must be outstanding in scholarship, in loyalty, and in service to the University.

Pi Mu Epsilon. The Ohio Theta Chapter of Pi Mu Epsilon, the national honorary mathematics fraternity, was established at Xavier University in 1962. The purpose of this organization is the promotion of scholarly activity in mathematics among students in academic institutions. Membership is limited to students, both graduate and undergraduate, majoring in mathematics or related subjects who have achieved distinction in scholarship and have done outstanding work in mathematics.

Psi Chi. Honorary psychology fraternity.

Sigma Pi Sigma. Honorary physics fraternity.

Tau Kappa Alpha. Honorary forensic fraternity.

The Xavier Order of Military Merit. XOMM is an honorary organization of Advanced Course students selected annually by a board consisting of elected representatives from the existing membership of XOMM and a member of the military faculty. The selection of new members is subject to approval by the PMS. Some of the criteria for selection to membership are leadership qualities, military and academic grades, and relative standing in the Cadet Regiment. Members of the order are awarded a red fourragere to be worn as part of the uniform.

Non-Student University Groups

The Booklovers Association, organized in 1925, actively promotes the interests of the library through the purchase of books and periodicals. Funds are raised by means of membership fees, benefit parties, and special gifts. This group, recruited largely from mothers of students, meets monthly during the academic year for lectures, card parties, and entertainments.

The Dads' Club of Xavier University has as its purpose: (1) co-operation with the administrative body of Xavier University in maintaining high standards of education; (2) the support of extra-curricular activities of the student body; (3) social acquaintance among members of the club; (4) promotion of the general welfare of Xavier University. Members of the faculty, and fathers of past, present, and prospective students are eligible for membership.

Xavier University Alumni Association. This association was organized in 1888. Its purpose is to strengthen and perpetuate college friendships; to preserve in the former students a warm regard for Alma Mater and a lively memory of the substantial benefits she has bestowed; to cherish and advance her interests, maintain her honor, and sustain her reputation by manly and honorable conduct.

Xavier University Alumnae Association. Established in 1926, this alumnae group has for its purpose the fostering of the same loyal spirit and helpful interest toward Alma Mater which is characteristic of the alumni.

The Honors Course Committee. The ladies of this committee support the Honors Bachelor of Arts program and allied activities of the College of Arts and Sciences.

The Faculty Wives. This organization sponsors social activities to promote friendship among families of the faculty and the administration.

The Musketeer Club. Alumni and friends of the University's athletic program participate in the activities of this club.

The Natural Law Society. Sponsored by Xavier University, this Society was founded in 1955 for members of the legal profession. Its purpose is to assist legislators, judges, and attorneys in the application of the natural law to the enactment, interpretation, and practice of law. Membership is informal and open to the entire legal profession. The Society has a Governing Board composed of Greater Cincinnati lawyers. It sponsors speakers, panel discussions, and study seminars.

The College of Arts and Sciences The College of Business Administration

Application for Admission and Admission Requirements

Admission policies apply in general to all undergraduates. Those planning to enter the Evening College, however, should apply directly to the Dean of that college. No deposit is required of Evening College applicants.

Application for Admission

Application for admission to the College of Arts and Sciences or the College of Business Administration is made on a special form which will be supplied upon request made to: Director of Admissions, Xavier University, Victory Parkway, Cincinnati, Ohio 45207. The applicant must fill out the form and send it to the Director of Admissions. He must also request his high school (and any colleges he may have attended) to forward directly to the Director of Admissions a transcript of his academic record.

A deposit of \$25.00 must accompany the Application for Admission. This deposit is applicable to the student's regular account at registration and is refundable only if he is refused admission to the University. Applicants are urged to submit their application forms with the deposit as early as possible. Upon receipt of an application from a student requiring housing accommodations, the Director of Housing will communicate with the applicant concerning a campus residence hall reservation.

Requirements for Admission

To be eligible to apply a student must be the graduate of an accredited high school with a minimum average of C (80%) and have

a recommendation from his high school principal. A minimum academic average of B is ordinarily required for admission to the Pre-Medical program. An applicant with a lower average is admitted at the discretion of the Committee on Admissions.

Applicants are required to take the College Entrance Examination Board Scholastic Aptitude Test. They should consult their high school principals for details regarding the test.

An applicant who was registered previously on the Evanston Campus but who has interrupted his residence is required only to submit the Application for Admission and the deposit, unless he has attended another school in the meanwhile.

Subjects Required for Admission

A unit is the equivalent of a subject extending through a school year of thirty-six weeks with five recitations per week. A minimum of fifteen units is required.

The following units are required of all applicants for admission:

English.....	3	Mathematics.....	1
Foreign Language.....	2	Natural Science.....	1
History.....	1	Other subjects.....	7

Of the seven non-specified units, three must be in college-preparatory subjects. Not more than four will be accepted in vocational subjects. The seven units must be offered from courses approved by the applicant's high school, for which credit has been granted. Single half units are acceptable only in those courses considered half-year subjects. Less than one full unit is unacceptable in subjects which ordinarily cover a full year's work and for which a full unit is usually granted. Applicants offering a classical or modern language must present a minimum of two units. An applicant who does not present two units of credit in a language (modern or classical) may offer as a substitute two units of either history and/or natural science. More than four units in any specific subject is not acceptable.

Admission on Probation

Applicants who do not meet the qualifications for admission may, under special circumstances, be admitted on probation at the discretion of the Committee on Admissions. They must pass whatever examinations the Committee on Admissions shall deem necessary.

Advanced Placement

The University grants advanced placement with credit in subjects in which a student has made a satisfactory score in the College Entrance Examination Board Advanced Placement tests.

Admission to the Pre-Medical Program

A minimum academic average of B is ordinarily required for admission to the pre-medical program. However, applicants whose averages are lower may be considered by the Committee on Admissions, given aptitude and intelligence tests, and admitted at the discretion of the Committee on Admissions.

Admission to Advanced Standing

Applicants from other institutions of collegiate rank must file with the Director of Admissions complete original credentials from all institutions attended. These credentials must include an official transcript of all high school and college credits showing the entire scholastic record; evidence of honorable dismissal or dismissals; and evidence of satisfactory completion of financial arrangements with the institution or institutions attended. No applicant may disregard his previous college record and apply for freshman standing.

The rank of advanced standing to which the student will be admitted will depend upon the quantity and quality of the work done in the other institution or institutions, the accreditation of the institution, and the conformity of the work to the degree program for which the student wishes to register. Courses in which the applicant has received the lowest passing grade will not be acceptable. These courses need not be repeated unless repetition be deemed necessary by the dean or the directors of the departments. In all cases evaluation of credits for advanced standing will be provisional for at least one semester.

Students dismissed for poor scholarship from the University or from other institutions will not be eligible for admission or readmission until after the lapse of at least one semester. In all cases, admission or readmission and the conditions of such, will be determined finally by the Committee on Admissions.

All credentials must be on file in the office of the Director of Admissions at least one month prior to the day of registration. (See paragraph on Necessary Credentials.) It is advisable to get transcripts in much earlier.

Necessary Credentials

Applicants for admission to Xavier University must submit official records from all high schools and colleges previously attended. *These records must be sent to the Director of Admissions directly by the proper officer of the school or schools formerly attended; never through the student.* Credentials accepted for admission become the property of the University and are kept on file permanently. *All credentials must be filed at least one month before the day of registration.*

Admission of Special Students and Auditors

Although the University usually recommends a complete program of studies, students who possess sufficient maturity, experience, and educational background may, with the dean's consent, choose special courses without following a complete degree program. Courses thus taken may be subsequently credited toward a degree if proper credentials are presented.

Students may enroll themselves as auditors upon payment of the usual fees and tuition. *Academic credit is never given to an auditor.*

Notification of Admission

The applicant will receive from Xavier University a notice of admission or a notice of unfavorable action as soon as the University has received his admission form and the official records from all high schools and all colleges previously attended.

Provisional Admission

Provisional admission may be granted by the dean to a student who has been unable to complete arrangements for formal admission before registration dates. If the student is later discovered to be unqualified for admission, his admission and registration are canceled.

Admission of Veterans

Xavier University is accredited with the Veterans Administration for educational training under Public Laws 550 and 894 (Korean conflict benefits).

All requests for information should be addressed to: The Director, Veterans' Education, Xavier University, Victory Parkway, Cincinnati, Ohio 45207.

Admission to Evening College

Those seeking admission to the undergraduate Evening College, whether in Arts and Sciences or in Business Administration, should apply to: The Dean, Evening College, Xavier University, Cincinnati, Ohio 45207.

Most of the regulations under "Application for Admission and Admission Requirements" apply also to the Evening College. But certain differences must necessarily exist between admission to a full-time and a part-time program; hence, those seeking admission to the Evening College would be well advised to write or telephone that office.

Registration

Time of Registration

Fixed dates in each session found in the academic calendar of this Catalogue are reserved for registration.

Late Registration

Registration on days later than the assigned dates may be permitted upon the payment of a late registration fee of \$5.00 and \$1.00 per day up to ten days.

Change in Schedule

After the student has filed registration forms, changes in courses or sections can be made only with the consent of the dean at the recommendation of the departmental adviser. No change in schedule may be made later than two weeks after the inception of classes.

A fee of \$3.00 will be charged for each change.

Number and Choice of Courses Permitted

The number and choice of courses or total number of credit hours in a student's program of studies are subject to such restriction as shall be deemed necessary by the dean or the departmental adviser.

Selection of Courses

Classified students must take the required courses at the proper class level: thus, all freshman courses should be completed before the sophomore courses.

Both classified and unclassified students must observe prerequisites set by the University or by the departments which conduct the instruction. *Students may not disregard the directions of the dean and of the chairmen of departments in this matter.*

Since the University must consider the needs of all students, it may sometimes be unable to accommodate itself to the preferences of some students for particular hours and professors. The scheduling of courses and sections at certain hours does not mean that a student can always be admitted to any given section which he may select.

Fees

Communications concerning costs for the Evening College should be addressed to the Dean of the Evening College, Xavier University, Cincinnati, Ohio 45207. Certain charges, such as the deposit with the application, are not required by the Evening College.

The following rates are effective in the regular academic year and in the summer sessions. All communications concerning expenses for the College of Arts and Sciences or the College of Business Administration should be addressed to the Director of Admissions, Xavier University, Victory Parkway, Cincinnati, Ohio 45207.

A deposit of \$25.00 must accompany the Application for Admission. For those requesting housing accommodations, an additional \$100.00 is required. These deposits will be applied to the student's regular account. They will not be refunded if the applicant, having been accepted, cancels his application or fails to enter the University.

Accounts Payable (Undergraduate Day Classes)

All accounts must be settled on the day of registration. Attendance at classes will not be permitted until all financial obligations have been completed.

Ordinary Expenses

Tuition per credit hour, undergraduate colleges	\$30.00
N.B.—Auditors pay same rate as above,	
Matriculation fee (payable once)	10.00
R.O.T.C. fee (per semester)	10.00
Deposit (partially refundable)	25.00
Laboratory science fee (per course per semester)	10.00
Laboratory materials deposit (per course per semester — partially refundable)	10.00
Laboratory materials deposit, Comparative Anatomy	12.00
Laboratory materials deposit for science thesis (partially refundable)	25.00
General fee (per semester)	25.00

(The general fee includes the use of all non-classroom facilities, the Student Health Center, and a reduction in the fee charged for the services of the Psychological Services Center.)

Identification Card (annually)	2.00
Language laboratory fee (to be paid by all students required to use the language laboratory, per semester)	5.00
Psychology laboratory fee (per semester)	10.00

Honors Course

A flat rate of \$475.00 per semester (exclusive of military fees) has been approved by the Board of Trustees for students pursuing the Honors A.B. degree course. This flat rate will also include extra courses which the Honors A.B. student, with the permission of the dean, wishes to take.

Contingent Expenses

Fee for change in registration	\$ 3.00
Late registration	5.00
Additional per day	1.00
Maximum	10.00
Special examinations (each)	2.00
Duplicate transcript	1.00
Graduate Record Examination	3.00
Graduation fee	25.00
Service charge (deducted if bill is paid in full within thirty days after the opening date of the semester)	4.00

Room

Room, per semester	\$140.00-\$160.00
Room damage deposit (refundable when student no longer lives on campus)	25.00

Room Equipment

All rooms are equipped with a bed, desk, chair, bed linen, and desk lamp.

Students are expected to bring blankets, towels, and soap.

Board

Meals are served in the University Center. Students who live on campus are required to take their meals in the University Dining Room from Monday through Friday. During the academic year

rates for three meals a day, five days a week, will be between \$230.00 and \$240.00 per semester, depending on food, labor, and maintenance costs. Meals are taken on a pay-as-you-go basis on Saturdays and Sundays.

Refunds (Undergraduate)

A refund of *tuition* may be claimed in the case of withdrawal or dismissal. During the academic year the amount refunded will be diminished by 20 per cent of the total initial amount for each two weeks of class meetings or fraction thereof. *No refund will be made after classes have been in session for more than eight weeks.* The amount of the refund will be calculated from the date of formal notification of withdrawal. Cf. page 72.

During summer sessions the amount refunded will be diminished by 20 per cent of the total initial amount for each four class days of the session or fraction thereof. No refund will be made after classes have been in session for more than sixteen class days.

Fees are not refunded in regular or summer sessions.

A refund of room and board expenses may be claimed in case of withdrawal. No refund will be made for the periods prior to November 1 and March 1 of the fall and the spring semesters respectively, nor may a refund of room and board expenses be claimed in case of either suspension or dismissal. The amount of the refund allowed after November 1 and March 1 will be based upon the proportionate number of weeks following these dates.

All refunds are made on application in writing to the bursar.

Academic Regulations

Classification of Students

Lower Division Groups:

1. Freshmen — students having less than 30 credit hours and 60 quality points.
2. Sophomores — students having from 30 credit hours and 60 quality points to 62 credit hours and 125 quality points.

Upper Division Groups:

1. Juniors — students having from 63 credit hours and 126 quality points to 93 credit hours and 187 quality points *inclusive of all lower division requirements.*
2. Seniors — students having a minimum of 94 credit hours and 188 quality points *inclusive of all lower division requirements.*

Other Groups:

1. Part-time — students taking less than 12 credit hours of work in any semester.
2. Unclassified — students who have not declared themselves as candidates for any degree.
3. Auditors — students not taking courses for college credit.

Unit of Instruction

A unit of instruction is one hour a week for a minimum of 15 weeks. The unit is called a *credit hour*. A weekly two- or three-hour period of laboratory work is considered equivalent to one credit hour.

Examinations

Examinations in all courses are regularly held at mid-semester and the end of the semester. A student who has been absent from a final examination will receive a grade of X if the excuse for the absence is acceptable to the dean; otherwise, the absentee will receive an automatic failure. Absence, however, does not excuse a student from the requirement of a special examination at a time determined by the dean. *If an X grade is not removed within two weeks, a grade of F will be given for the course.*

Written assignments are due at the time specified by the instructor. If extension of time is granted, the student will be given a temporary grade of I. Unless the assignments are completed within two weeks after the last day of the regularly scheduled examinations, the student will be recorded as failing the course.

If a student claims knowledge of a subject for which he cannot furnish an official record, a special examination may be given with the approval of the dean and the chairman of the department.

Grading System and Reports

- A — Exceptional. Indicates not only high achievement but also an unusual degree of intellectual initiative.
- B — Good. Indicates attainment above the average.
- C — Average. Indicates the normal attainment for the average student.
- D — Inferior. Indicates passing work but below the normal attainment.
- F — Failure.
- FA — Failure because of excessive absences.
- I — Incomplete; grade withheld pending fulfillment of assignment.
- W — Withdrawal (approved).
- WP — Withdrew passing.
- WF — Withdrew failing.
- X — Absent from examination.

N.B.—No student may withdraw from a class within the last two weeks of the semester. At this time he must either take the examination or receive a failure.

Quality Points

The quality point is the unit used in measuring the quality of student achievement in a course. The number of quality points received for any course is equal to the number of quality points attached to the grade received multiplied by the number of credit hours yielded by the course. Quality points are given as follows:

- A — 4 points per credit hour
- B — 3 points per credit hour
- C — 2 points per credit hour
- D — 1 point per credit hour

The scholastic standing of the student at the end of any session is the ratio of the total number of quality points received to the total number of credit hours carried in that session. An Evening College session or semester consists of twelve consecutive semester hours.

Probation

Freshmen admitted to the University on probation must earn a quality point average of 1.75 during the first semester to remove the probation.

Students whose academic work does not meet the following quality point norms will incur probation:

Freshmen whose average falls below 1.75 in either semester.

Sophomores, juniors, and seniors whose average falls below 2.00 in any semester.

Probation will continue for at least one semester. During that semester the student's program will be reduced by at least one course, and he may not participate in co-curricular activities except those of a religious nature. Probation which begins or ends at midyear shall begin or end with the first day of class in the second semester.

If the student fails to average 2.00 during the semester in which he is on probation, he will be dismissed from the University.

If his average during that semester is 2.00 but his over-all average is less than 2.00, his probation will continue for a second semester.

A student who continues on probation during two consecutive semesters because his average is below 2.00 will be dismissed from the University.

If the student's record or certain modifying circumstances indicate that his work will improve and that he will graduate in approximately normal time, the dean will give due consideration to such facts as the record indicates. The above should be interpreted in the light of the fact that an average of 2.00 is a minimum requirement for graduation.

Warned List

A student whose quality point average is low but not low enough to justify his incurring probation is placed on the warned list.

Such a student does not come under censure, but his participation in co-curricular activities may be limited at the discretion of the dean or the student's adviser.

Failure

A student who fails in two or more courses in a semester may be excluded from registration at the dean's discretion.

Permission to re-enter the University will be granted only after the student petitions for re-admission in writing and sets forth evidence of his ability to do satisfactory academic work.

Censure

The University reserves the right to censure the conduct of any student on or off the campus in accord with the generally accepted norms of good behavior, Catholic practice, and Catholic principles of morality. This censure will be regarded as purely disciplinary and

may take the form of correction, suspension, or dismissal which the President of the University, upon advice of the Committee on Student Welfare, may deem appropriate. Suspension will carry with it the scholastic loss resulting from absence, and dismissal will mean the loss of credit hours. When a student incurs the disciplinary censure of dismissal, or withdraws while under the censure of suspension, the University has the right to declare, at the discretion of the President, the facts of disciplinary censure to the admissions officer of any educational institution to which the student may subsequently apply.

Attendance

In order to secure credit in any course in which he is registered, the student is required to attend classroom and laboratory exercises regularly and promptly. Absences date from the day of opening announced in the calendar.

Absence from a Test

Unexcused absence from a previously announced test may incur the penalty of a failure in that particular test.

Transfer within the University

A student who wishes to transfer from one college of the University to another must make application to the Dean or the Assistant Dean of the College to which he desires to transfer. If the application is approved, arrangements for the transfer will be made.

Transfers should be arranged at least one month before the opening of a session.

Withdrawal from Course

If a student withdraws from any or all courses without permission of the dean, he receives an automatic failure. *Permission will be given only when application is made within two weeks after discontinuance of attendance or from the corresponding portion of a summer session.*

The student who withdraws from any or all courses with the requisite permission receives a grade of W, if the withdrawal takes place *within* the first third of the session; or a grade of WP (withdrew passing) or WF (withdrew failing), if he withdraws *after* the first third of the session. The grade WF is accounted as a failure in computing scholastic standing. No student may withdraw from a class during the last two weeks of the semester.

Withdrawal from the University

A student who wishes to withdraw from the University must notify the office of the dean either in person or in writing. *A student*

is considered to be in attendance until he has given this formal notice of withdrawal.

A student will be obliged to withdraw for reasons of poor scholarship, failure to remove academic probation, or misconduct.

Xavier University reserves the right to require a student to withdraw if, in the judgment of University officials, such action would be beneficial to the physical, mental, emotional, or moral best interests of the student, or is considered necessary for the welfare of the University.

Honorable Dismissal

Honorable dismissal is voluntary withdrawal from the University *with the consent of the dean*. A statement to such effect, indicative of the student's good standing so far as character and conduct are concerned, *will be issued only when all indebtedness to the University has been adjusted.*

Transcript Regulations

Application for a transcript of credits must be made in writing by the student himself and filed with the registrar *at least two weeks before the record is needed.*

Requests for transcripts for purposes of transfer to another university or for any other purpose cannot be granted during the busy periods of examination and registration.

Transcripts are issued only after the student has fulfilled all financial obligations to the University.

There is no charge for the first transcript. A fee of \$1.00 is charged for each additional transcript.

Since the Registrar's Office does not maintain Graduate School or Evening College records, students who have been registered in one of the undergraduate day colleges and later in the Graduate School or Evening College must apply to both the Registrar's Office and the Graduate School or Evening College when requesting transcripts.

Auditor

A student may audit a course if he has the written permission of the Dean. No one may change from the status of auditor to that of credit student. No one may change from credit student to auditor after the date for assigning the grade of W passes.

Curricular Information

Lower Division and Upper Division Courses

Courses are grouped according to their basic or advanced content. Basic courses, which are ordinarily open to freshmen and sophomore students, are regarded as *lower division* courses. *Upper division* courses are open to junior and senior students. Sophomore students, who have completed their *lower division* requirements in a particular department, may, with the approval of their advisers and the chairman of the department, enroll in an *upper division* course in that department.

Departments

For the purposes of faculty administration and of classification of courses according to the nature of their subject matter, all courses are grouped in *departments*. In the College of Arts and Sciences there are these departments: Biology, Chemistry, Economics (A.B. or B.S.), Education, English, History and Political Science, Classical Languages, Modern Languages, Mathematics, Military Science, Philosophy, Physics, Psychology, Sociology, and Theology. The College of Business Administration has Departments of Accounting, Economics (B.S.B.A.), Finance, Management and Industrial Relations, and Marketing. The Evening College offers courses in most departments.

Lower Division Objectives

Toward realization of the immediate University objectives (intellectual competence with a sense of religious and moral responsibility) and the objectives of the undergraduate division (an exclusively general and liberal training), the student should, at the completion of his work of the first two years, have attained the following:

1. A religious knowledge adequate for personal orientation and influential Christian living
2. An acquaintance with, and some practice in, the modes of thinking — philosophical, mathematical, and scientific
3. A competence in basic English communication, written and oral, with an adequate acquaintance with the types, and some of the masterpieces of English literature
4. Generally, a reading knowledge of at least one foreign language
5. An acquaintance with the history and principles of social institutions

The objectives and standards of the several departments concerned in this program indicate their special contribution to the above,

in such a way that a student who has completed a minimum of sixty-four hours with a C average, can be regarded as having sufficiently attained the objectives.

Excess quality points at the completion of the student's lower division work may not be applied to remove a quality-point deficiency in the upper division work.

Field of Specialization

Before the close of his sophomore year, the student who wishes to continue his education in the University will be required to choose a field of specialization for his future work. Only upon acceptance by the chairmen of the departments concerned, and on successful completion of his *lower division* work, may the student be considered eligible to continue.

In the last semester of his *lower division* work, a student who has satisfied the *lower division* prerequisites in a particular subject, may, if his schedule allows, and if the dean and the chairman of the department concerned authorize it, take an *upper division* course in that subject.

The field of specialization consists of a major and a minor. Philosophy is the student's second minor. See General Requirements for All Degrees, No. 3.

The College of Business Administration requires a curricular diversification as follows: thirty-six hours of core courses and twenty-four hours in the student's area of specialization, without defining a major or, especially, a minor.

Upper Division Objectives

Toward more special realization of the immediate University objectives (intellectual competence, etc.) and the objectives of the undergraduate division for the last two years of college (continued general and liberal training *plus* opportunities for specialization), the student is offered the following:

1. A continuation of his general and liberal training in the study of philosophy and allied subjects
2. Fields of specialization, with a major and minors system, for prudent concentration

Degrees

The University will confer a bachelor's degree upon any candidate of the University who has successfully completed an accepted program of studies, and who has fulfilled, prior to graduation, all degree requirements, both general and particular. The undergraduate degrees conferred by the University on candidates of the College of Arts and Sciences are the degrees of Bachelor of Arts, Bachelor of

Science, and Bachelor of Literature. Graduates of the College of Business Administration receive the Bachelor of Science in Business Administration.

Graduation Honors

Honors are awarded on the basis of outstanding moral and intellectual attainment. A student who has earned a quality-point average of 3.75 in his four years of college work will be graduated *Summa Cum Laude*; one who has earned 3.5, *Magna Cum Laude*; one who has earned 3.25, *Cum Laude*. These honors are announced at commencement and are inscribed on the diplomas of those meriting them.

For students graduating in June, the final semester's work cannot be computed in determining the quality-point average for honors.

Transfer students are eligible for honors at graduation only under the following conditions:

1. They must have completed at least *sixty-four* semester hours of work at Xavier University.
2. Their quality-point average must be computed on the basis of *all of their college work*.
3. Under no circumstances will honors be awarded that are higher than the honors merited by the quality-point average earned at Xavier University.

Residence Requirements

Candidates for degrees must spend at least the last year in residence at Xavier University. Residence is the personal presence at the University of a student carrying a normal weekly load. To establish residence of a year for a bachelor's degree at the University, a student ordinarily must complete one-fourth of the total number of hours required for graduation.

General Requirements for Graduation

In addition to the requisites of a particular program, a candidate for the bachelor's degree must fulfill the following requirements:

1. The candidate shall have qualified as a classified student in Xavier University and shall have all records from other institutions in order.
2. The candidate shall have completed an accepted academic program of not less than one hundred twenty-eight credit hours with an average of C. Specifically, an average of 2.0 (C) shall have been maintained in his *upper division* courses.
3. The candidate shall have completed all *lower division* objectives.

4. The candidate shall have fulfilled the *lower division* and *upper division* objectives in the matter of distribution of courses.
5. The candidate, except for the degree of Bachelor of Literature, shall have completed a minimum of eighteen semester hours of prescribed philosophy courses.
6. The candidate, if a Catholic, shall have completed eight credit hours in formal courses in theology, and eight credit hours in Christian Culture courses.
7. The candidate, if a non-Catholic, shall have successfully completed Th 3 and 5 (or their equivalent) and eight credit hours of Christian Culture courses. Evening College students may substitute for Th 3 and 5 with the dean's permission.
8. The candidate shall have completed, *in residence*, the last thirty-two credit hours (C average) in courses approved by his proper dean.
9. The candidate whose major is chemistry must qualify by a written thesis. The original and one copy, required by the University, must be deposited with the registrar on or before the date designated in the University calendar. All other candidates must qualify by a comprehensive examination unless a department has a substitute requirement.
10. The candidate shall have made formal application to the dean for the degree sought. This form shall have been filed in the registrar's office at the beginning of the last session.
11. The candidate shall have discharged all financial obligations to Xavier University.
12. Seniors in the College of Arts and Sciences must take the Graduate Record Examination (Advanced Test) in their major fields.
13. All candidates for degrees must be present at the commencement to receive their degrees.

N.B. — No student will be considered eligible for graduation who has any deficiency at the beginning of the last session of his senior year, or who has fewer than one hundred and twelve credit hours of C average.

Reservation of Rights

The University reserves the right to modify its graduation and other academic requirements as may seem necessary from time to time. It will be obligated only during the academic year of the student's registration by requirements published in the Catalogue for that year.

Approved Curricula

Registration Procedures

The block schedules on the following pages are given as guides to the preparation of individual programs of study.

Before registration each semester, departmental advisers and students are urged to check individual student programs *in detail* for:

1. Correct course levels — *lower division* or *upper division*. (*Upper division* courses may not be taken before the completion of required *lower division* courses in the field.)
2. Whether degree requirements are being fulfilled.
3. Correct Catalogue numbers of courses.
4. The maximum number of semester hours of credit permitted per semester at the respective class level — freshman, sophomore, junior, or senior. Permission to take an additional course may be granted only at the discretion of the dean.

General Requirements for All Degrees

The following requirements apply to all curricula and are to be noted carefully:

1. All candidates for degrees, whether in arts, in science, or in business administration, must complete the following requirements as the core of their liberal education.

Cr. Hrs.

Christian Culture	8
English (composition and literature)	12
History	6
Mathematics (except physical education, and A.B. option)	6
Military Science*	6
Modern Language† (depending on high school units)	6/12
Philosophy	18
Psychology	3
Science (A.B. option)	8
Speech	2
Theology‡	8

*Not required of Evening College students.

†Not required in business administration.

‡Non-Catholic students should confer No. 7 in the preceding General Requirements for Graduation.

2. In general, students in any program may fulfill requirements for the Bachelor of Arts degree by including two years of college Latin and six to twelve hours of modern language in their course of study. See block schedule for A.B. (General).
3. Students must complete from six to fifteen hours of *lower division* work preparatory to the specialization of their choice. They must also have no fewer than eighteen hours of *upper division* work in the major, in all of which they must attain an average of C. They must also have twelve hours of *upper division* work and at least six hours of *lower division* work in the minor.
4. A minimum of one hundred and twenty-eight credit hours with an overall average of C are required for graduation. The last thirty-two must be in residence.
5. All students must complete Pl 132 and So 125 as Christian Culture courses.
6. In programs in which the student will not normally complete the *lower division* requirements for his minor in sophomore year (*e.g.* an English, history, or economics major with an education minor), he will defer a prescribed sophomore course and complete the *lower division* requirement for his minor.
7. The student must have completed two years of Military Science (ROTC) unless exempted.

Degree Programs— The College of Arts and Sciences

THE HONORS BACHELOR OF ARTS

The Honors Bachelor of Arts is awarded to students who have completed the entire Honors program of the University. This curriculum was instituted in the belief that its values meet the needs of the day for Christian humanism. It attempts to build a security based on those things that are themselves secure—the great languages and their literatures; the nature of science; the history of human thought and action; philosophy, by which men come to understand themselves, the ways of God with humankind, their dignity as men, and their obligations to their fellowmen.

Only those ranking high in their high school graduating classes will be admitted to the Honors program. A special board of admissions passes on the fitness of applicants. In doubtful cases applicants will take special examinations to determine their qualifications for the program.

In addition to the regular requirements for admission to the University, students accepted for the Honors course must have four units of Latin, and it is desirable that they have two units of Greek.

It will be noted that the thirty-five or thirty-eight elective hours in the H.A.B. course enable the superior student, in addition to completing an intensive course in the liberal arts, to cover the pre-medical requirements or to do concentrated work in a major field such as classics, economics, English, history, the modern languages, philosophy, or psychology.

The minimum requirements:

Subject	Sem. Hrs.			Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Biology*	8		Military Science.....	6	
Chemistry†	9		Modern Language....	6	
English.....	6	9	Philosophy.....	3	22
Greek.....	6-12	12	Senior Compre-		
History.....	6	6	hensive Reviews....	4	
Latin.....	6	18	Theology.....	8	
Mathematics‡	6		Electives.....		35

*In place of biology, mathematics majors register for physics.

†In place of chemistry, psychology majors take biology.

‡The six hours of mathematics must include calculus.

Honors Bachelor of Arts

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.....	3	En 4 English Comp.....	3
Fr 1, Gk 17, El. Fr., Lysias†..	6	Fr 2, Gk 21 El. Fr., Plato‡... 6	
or		or	
Gk 1, 2 Elem. Greek.....	6	Gk 17, Gk 21, Lysias, Plato... 6	
Hs 7 Europe to 1500.....	3	Hs 8 Europe Since 1500....	3
Lt 28 Cicero.....	3	Lt 51 Virgil.....	3
Mt 50 Calculus, Geometry I. 3		Mt 51 Calculus, Geometry II. 3	
Ms 1 First Year Basic.....	1	Ms 2 First Year Basic.....	1
Th 40 Christ in Gospel.....	2	Th 41 Christ the Redeemer... 2	
Total.....	21	Total.....	21

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 3 Zoology.....	4	Bl 4 Zoology.....	4
Ch 3* General Inorganic....	4	Ch 4* General Inorganic....	5
En 31 Studies in Lit.....	3	En 32 Studies in Lit.....	3
Gk 160 Sophocles.....	3	Gk 141 Thucydides.....	3
Lt 113 Adv. Latin Comp....	3	Lt 131 Horace.....	3
Ms 31 Second Year Basic....	2	Ms 32 Second Year Basic....	2
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
Elective.....	3	Pl 34* Logic.....	3
Elective, Directed**.....	3	Elective, Directed**.....	3
*Total.....	21-24	*Total.....	25
**Total.....	20-23	**Total.....	20-23

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 3** General Inorganic....	4	Ch 4** General Inorganic....	5
Gk 171 Plato.....	3	Gk 151 Homer.....	3
Hs 141 U. S. to 1865.....	3	Hs 142 U. S. Since 1865....	3
Lt 191 Lucretius.....	3	Lt 112 Tacitus.....	3
Elective.....	6	Elective.....	6
Pl 111 Phil. Psychology.....	3	Pl 105 Phil. of Nature.....	3
**Total.....	16-22	**Total.....	17-23
*Total.....	12+Sciences	*Total.....	12+Sciences

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
English Elective.....	3	Lt 199 Senior Comp. Rev....	2
Lt 161 Roman Comedy.....	3	Lt 142 Juvenal.....	3
Gk 199 Senior Comp. Rev....	2	Pl 132 Pers., Soc. Ethics....	3
Pl 131 Prin. of Ethics.....	3	Pl 198b Saint Thomas.....	5
Pl 198a Saint Thomas.....	5	Major Elective.....	9
Major Elective.....	6	Total.....	13-22
Total.....	16-22	Total.....	13-22

*For pre-med.

**For non pre-med.

†Students having two units of high school Greek will register for Fr 1 and Gk 17.

‡Students who have completed Fr 1 and Gk 17 will register for Fr 2 and Gk 21. Those who have completed Gk 1, 2, will register for Gk 17 and 21.

THE BACHELOR OF ARTS

The Bachelor of Arts degree is conferred upon students who have satisfactorily completed two years of college Latin (with an average of C or better) and six to twelve hours of a modern language or twelve hours of Greek, along with the hours in the various fields indicated below.

A major or minor in Classics, combining Latin and Greek, may also be arranged with the approval of the Chairman of the Department.

<i>Subject</i>	<i>Sem. Hrs.</i>		<i>Subject</i>	<i>Sem. Hrs.</i>	
	<i>L.D.</i>	<i>U.D.</i>		<i>L.D.</i>	<i>U.D.</i>
Latin.....	12	—	Psychology.....	3	—
English.....	12	—	Speech.....	2	—
History.....	6	—	Theology.....	8	—
Math. or Science....	6-8	—	Christian Culture....	—	8
Military Science....	6	—	Minor.....	—	*
Modern Language...6-12			Major.....	—	*
or Greek.....	12		Electives.....	—	6
Philosophy.....	3	15			

*Departmental requirements for major and minor must be fulfilled.

A.B.

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
En 3 English Comp.....	3	En 4 English Comp.....	3
Hs 7 Europe to 1500.....	3	Hs 8 Europe since 1500....	3
Lt.....	3	Lt.....	3
ML 1 or Gk.....	3	ML 2 or Gk.....	3
MS 1 First Year Basic....	1	MS 2 First Year Basic....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	15	Total.....	15

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
En 31 Studies in Lit.....	3	En 32 Studies in Lit.....	3
Lt.....	3	Lt.....	3
ML 31 or Gk.....	3	ML 32 or Gk.....	3
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
Ps 31 Gen. Psychology.....	3	Pl 34 Logic.....	3
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
Total.....	16	Total.....	16

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
So 125 Marriage.....	2	Christian Culture.....	2
Major.....	6	Major.....	6
Minor.....	3	Minor.....	3
Mt or Science.....	3-4	Mt or Science.....	3-4
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
Total.....	17-18	Total.....	17-18

Senior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
CA 1 Prin. of Speech.....	2	Senior Comp. Rev.....	2
Major.....	3	Pl 132 Pers., Soc. Ethics....	3
Minor.....	3	Major.....	3
Pl 131 Prin. of Ethics.....	3	Minor.....	3
Christian Culture.....	2	Elective.....	6
Pl 105, 106, 107, or 133....	3		
Total.....	16	Total.....	17

THE BACHELOR OF SCIENCE (Biology)

The Bachelor of Science is conferred on students who major in biology and who generally minor in chemistry, psychology, or other sciences. Lectures and laboratory procedures are designed to give students a knowledge of basic biological principles and a training in careful observation, controlled experimentation, and a thoughtful analysis of scientific data. The department aims, furthermore, to contribute to the liberal education and cultural background of its students. This program provides an adequate foundation for further studies in graduate schools of biology, for professional studies in medicine and dentistry, and for the teaching of biology on the high-school level.

The minimum program requirements are:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Biology.....	8	28	Modern Language...6-12	—	—
Minor.....	6	14	Philosophy.....	3	15
Christian Culture....	—	8	Psychology.....	3	—
English.....	12	—	Physics.....	8	—
History.....	6	—	Speech.....	2	—
Mathematics.....	6	—	Theology.....	8	—
Military Science.....	6	—			

With the approval of the Chairman of the Department of Biology some courses in the other sciences may be used to fulfill the requirements of a major in biology.

B.S. (Biology)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 3 Gen. Zoology.....	4	Bl 4 Gen. Zoology.....	4
Ch 3 Gen. Chemistry.....	4	Ch 4 Gen. Chemistry.....	5
En 3 English Comp.....	3	En 4 English Comp.....	3
Mt 31 (or 11).....	3	Mt 50 (or 12).....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	17	Total.....	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 105 General Botany.....	4	Bl 152 Genetics.....	2
Hs 7 Europe to 1500.....	3	Hs 8 Europe since 1500....	3
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
Ph 3 College Physics.....	4	Ph 4 College Physics.....	4
Pl 84 Logic.....	3	Pl 111 Phil. Psychology.....	3
Th 42 Christ in His Church..	2	Ps 31 Gen. Psychology.....	3
		Th 43 Christ in the Soul....	2
Total.....	18	Total.....	19

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 101 Compar. Anatomy....	4	Bl 112 Embryology.....	4
Ch 101 Organic Chemistry...	4	CA 1 Prin. of Speech.....	2
En 31 Studies in Lit.....	3	Ch 102 Organic Chemistry...	4
ML 1 Elem.....	3	ML 2 Elem.....	3
Pl 100 Metaphysics.....	3	Pl 105, 106, 107, or 133....	3
So 125 Marriage.....	2	CC Elective.....	2
Total.....	19	Total.....	18

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 199a Senior Thesis.....	1	Bl 199b Senior Thesis.....	1
Bl 161 Physiology.....	4	Bl 141 Comp. Histology....	4
Bl Elective.....	4	Elective.....	4
CC Elective.....	2	En 32 Studies in Lit.....	3
ML 31 Interm.....	3	Pl 132 Pers., Social Ethics..	3
Pl 131 Prin. of Ethics.....	3	ML 32 Interm.....	3
Total.....	17	Total.....	18

THE BACHELOR OF SCIENCE (Chemistry)

The Department of Chemistry offers a comprehensive curriculum leading to the Bachelor of Science. The program covers the four major fields (inorganic, analytical, organic, and physical chemistry), the preparation and identification of compounds, and the literature on the subject. Ch 190 (Chemical Literature) fits the student to prepare his thesis and amounts to a beginning course in research.

Xavier University is approved by the American Chemical Society for its training in chemistry.*

Departmental requirements for a major include:

1. The completion of Ch 3 and 4 as an introduction to *upper division* work.
2. The completion of Ch 51, 101, 102, 106, 107, 116, 125, 126, 170, 171, and 190, or the equivalent.
3. A senior thesis, Ch 199.

Departmental requirements for a minor include:

1. The completion of Ch 3 and 4 as an introduction to *upper division* work.
2. The completion of Ch 51, 101, 102, and 121.

The minimum program requirements follow:

Sem. Hrs.		Sem. Hrs.	
Subject	L.D. U.D.	Subject	L.D. U.D.
Chemistry.....	13 31	German.....	6-12 —
Christian Culture....	— 8	Philosophy.....	3 15
English.....	12 —	Physics.....	8 —
History.....	6 —	Theology.....	8 —
Mathematics.....	9-12 3-6	Speech.....	2 —
Military Science.....	6 —		

*Students completing the approved program of studies are graduated as "certified" chemistry majors.

B.S. (Chemistry)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 3 General Chemistry....	4	Ch 4 General Chemistry....	5
Mt 31 Algebra, Trig. (or Mt 50)*.....	3	Mt 50 Calculus, Geom. I (or Mt. 51).....	3
Hs 7 Europe to 1500.....	3	Hs 8 Europe after 1500....	3
En 3 English Comp.....	3	En. 4 English Comp.....	3
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
	—	CA 1 Prin. of Speech.....	2
Total.....	16	Total.....	19

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 101 Organic Chemistry....	4	Ch 102 Organic Chemistry....	4
Mt 51 Calculus, Geom. II (or Mt 52).....	3	Mt 52 Calculus, Geom. III (or Mt Upper Div)..	3
En 31 Studies in Lit.....	3	Pl 34 Logic.....	3
Ph 9 University Physics I....	4	Ph 10 University Physics II..	4
Th 42 Christ in His Church... 2		Th 43 Christ in the Soul....	2
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
Total.....	18	Total.....	18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 51 Quant. Inorg. Analysis 4		Ch 170 Interm. Inorg. Chem..	3
Ch 125 Physical Chemistry... 3		Ch 126 Physical Chemistry... 4	
Mt Upper Div.....	3	Ch 190 Chemical Literature..	1
Gr 1 Elementary German... 3		Gr 2 Elementary German... 3	
Pl 111 Phil. Psychology.... 3		Pl 100 Metaphysics.....	3
So 125 Marriage.....	2	CC Christian Culture... 2 (3)	
	—	En 32 Studies in Lit.....	3
Total.....	18	Total.....	19 or 20

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 116 Chem. Measurements. 4		Ch 106 Qual. Organic Chem..	3
Ch 107 Interm. Organic Chem. 2		Ch 199b Senior Thesis.....	1
Ch 171 Inorg. Chem. Lab.... 1		CC Christian Culture... 2 (0)	
Ch 199a Senior Thesis..... 1		Gr 34 Scientific German.... 3	
Gr 33 Scientific German... 3		Pl 132 Pers., Social Ethics... 3	
Pl 131 Prin. of Ethics..... 3		Pl 105, 106, 107 or 133.....	3
Total.....	14	Total.....	15 or 13

*If a student has advanced standing in algebra and trigonometry, he may register for Mt 50: Calculus. Otherwise the math sequence begins with Mt 31. Courses labelled Upper Division Mathematics are selected with the approval of adviser.

THE BACHELOR OF SCIENCE (Economics)

A Bachelor of Science degree in economics is offered those who wish to take the traditional liberal arts program. The curriculum of an economics major is designed to satisfy the student's desire for a broad liberal arts background, and to provide a general, but thorough, understanding and appreciation of economic activity.

Students majoring in economics must complete these specific courses:

Course No.	Subject	Sem. Hrs.
Ec 33, 34	Principles of Economics	6
Ec 100	Survey of Accounting	3
Ec 130	Labor Economics	3
Ec 134	Economic Theory and Social Order	3
Ec 133	Microeconomic Analysis	3
Ec 139	History of Economic Thought	3
Ec 150	Money and Banking	3
Ec 190	Business Statistics	3
	Elective	3
Total		30

Prescribed subjects and credit hours required for the B.S. (Economics) follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Economics	6	24	Military Science	6	—
Minor	6	12	Philosophy	3	15
Christian Culture	—	8	Psychology*	3	—
English	12	—	Theology	8	—
History	6	—	Science	8	—
Mathematics	6	—	Speech	2	—
Modern Language	6-12†	—			

*With the permission of the Chairman of the Department, another subject may be substituted for psychology.

†Six hours of modern language suffice if student is explicitly exempted by the Department of Modern Languages from ML 1, 2.

B.S. (Economics)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.	3	En 4	English Comp.	3
Hs 7	Europe to 1500	3	Hs 8	Europe since 1500	3
ML 1	Elem.	3	ML 2	Elem.	3
Th 40	Christ in the Gospels	2	Th 41	Christ, Our Redeemer	2
Science		4	Science		4
MS 1	First Year Basic	1	MS 2	First Year Basic	1
Total		16	Total		16

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Ec 33	Prin. of Economics	3	Ec 34	Prin. of Economics	3
En 31	Studies in Lit.	3	En 32	Studies in Lit.	3
ML 31		3	ML 32		3
Ps 31*	Gen. Psychology	3	Pl 34	Logic	3
Th 42	Christ in His Church	2	Th 43	Christ in the Soul	2
MS 31	Second Year Basic	2	MS 32	Second Year Basic	2
Total		16	Total		16

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Ec 130	Labor Economics	3	Ec 150	Money and Banking	3
Ec 190	Business Statistics	3	Ec 139	Hist of Econ. Thought	3
Minor		3	Minor		3
Mt 11 or 21		3	Mt 12 or 22		3
Pl 111	Phil. Psychology	3	Pl 100	Metaphysics	3
So 125	Marriage	2	Elective		3
Total		17	Total		18

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
CA 1	Prin. of Speech	2	Ec Elective		3
Ec 100	Survey, Accounting	3	Elective		3
Ec 134	Econ. Theory and Social Order	3	Minor		3
Ec 133	Inter. Econ. Anal.	3	Pl 105, 106, 107, or 133		3
Minor		3	Pl 132	Pers., Soc. Ethics	3
Pl 131	Prin. of Ethics	3			
Total		17	Total		15

*With the permission of the Chairman of the Department, another subject may be substituted for psychology.

TEACHER CERTIFICATION

The courses in education, planned to provide the required preparation for teaching in secondary schools, are open to students majoring in any department.

The minimum professional requirements for high school certification in Ohio are:

1. For the teaching of any subject: Ed 31, 41, 101, 102, 103, and a two-hour elective in education. These constitute a minor in education.
2. For teaching health and physical education: Bl 9, 10, Ed 161, 162, 163, 164, 165, 166, 167, 168, and 169. These courses, together with those listed under 1, above, constitute a major in physical education, and lead to the Bachelor of Science.
3. For teaching other subjects (history, English, etc.), the student must consult the specific state requirements for each subject. Copies of these requirements may be secured in the office of the Chairman of the Department of Education.

Students desirous of meeting professional requirements of other states, should obtain an official statement of specific requirements from the Department of Education of their respective states, and consult the Chairman of the Department before registering for courses in education.

THE BACHELOR OF SCIENCE (Education: Physical)

The minimum program requirements for the Bachelor of Science in Physical Education are:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Education.....	6	30	Modern Language... 6-12	—	—
Minor.....	6	12	or Mathematics...	6	—
Christian Culture....	—	8	Philosophy.....	3	15
English.....	12	—	Psychology.....	3	—
History.....	6	—	Science (Bl 9, 10)...	6	—
Military Science....	6	—	Speech.....	2	—
			Theology.....	8	—

B.S. (Education: Physical)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 9 Human Anatomy*....	3	Bl 10 Human Anatomy*....	3
En 3 English Comp.....	3	En 4 English Comp.....	3
HS 7 Europe to 1500.....	3	HS 8 Europe since 1500....	3
Mt 11 or 21; or ML†.....	3	Mt 12 or 22; or ML†.....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	15	Total.....	15

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ps 31 Gen. Psychology*....	3	Pl 34 Logic*.....	3
Ed 31 Prin. of Education....	3	Ed 41 Ed. Psychology.....	3
Ed 165 Coaching†.....	2	Ed 166 Coaching†.....	2
Ed 167 Health and Hygiene†..	2	Ed 168 Health and Hygiene†..	2
En 31 Studies in Lit.....	3	En 32 Studies in Lit.....	3
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
Total.....	17	Total.....	17

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage.....	2	Christian Culture.....	2
Ed 101 Secondary Methods... 2		Ed 102 Secon. Curriculum... 2	
Ed 163 Phys. Education†....	2	Ed 164 Phys. Education†....	2
Minor.....	3	Minor.....	3
Pl 111 Phil. Psychology....	3	Pl 100 Metaphysics.....	3
Teaching Field.....	3	Teaching Field.....	3
Elective.....	2		
Total.....	17	Total.....	15

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ed 103 Stud. Teaching.....	6	Ed 169 Practicum: Com-	
Ed 161 Admin. of Phys. Ed... 3		munity Recreation.. 2	
CA 1 Prin. of Speech.....	2	Ed 162 Admin. of Health Ed.. 3	
Pl 131 Prin. of Ethics.....	3	Minor.....	6
Christian Culture.....	2	Pl 105, 106, 107, or 133....	3
Total.....	16	Pl 132 Pers., Social Ethics... 3	
		Total.....	17

*Bl 9 and 10 will be offered every other year alternating with Ps 31 and Pl 34 in the freshman-sophomore program.

†In alternate years when Ed 165, 166 and Ed 167, 168 are not taught, substitute Ed 163, 164.

‡Degree requirements give the student a choice of six hours of mathematics or six to twelve hours of modern language.

THE BACHELOR OF SCIENCE (Teaching Science or Mathematics)

This degree is designed for high school teaching of science or mathematics to meet state requirements (1) for the teaching areas of chemistry and mathematics; (2) for physics and mathematics; (3) for general science and mathematics; (4) for biology and general science; and (5) for the science comprehensive teaching area with principal emphasis on physics or biology or chemistry.

Students desiring to teach, who so choose, may meet requirements for the Bachelor of Science degrees with full majors in the individual sciences or mathematics providing they include the appropriate 18 semester hours in education. Their program will ordinarily extend beyond the eight semesters required for bachelor's degrees. Students following the B.S. (Teaching Science or Mathematics) will ordinarily not have completed the major prerequisites for entrance to graduate studies in any one science or in mathematics.

1. For teaching chemistry and mathematics:

Chemistry (Courses listed under 5—c below)	24 hours
Mathematics	18
Education	18
Remainder of required courses, minimum	68
Total	128

The eighteen hours of mathematics courses required will consist of Mt 31: Algebra and Trigonometry, 3 credit hours; Mt 50, 51, 52: Calculus and Geometry I, II, III, 9 credit hours; Mt 124: Mathematical Statistics I, 3 credit hours; and Mt 130: Theory of Numbers, 3 credit hours. If the student has already completed Mt 31, he may take another three-hour mathematics course as suggested by his adviser.

Ch 3, 4 in this program is the eight-hour freshman chemistry course.

2. For teaching physics and mathematics:

Physics (Courses listed under 5—a below)	24 hours
Mathematics	18
Education	18
Remainder of required courses, minimum	68
Total	128

The eighteen hours of mathematics courses required will consist of Mt 31: Algebra and Trigonometry, 3 credit hours; Mt 50, 51, 52: Calculus and Geometry I, II, III, 9 credit hours; Mt 104: Differential Equations, 3 credit hours; and Mt 106: Advanced Calculus, 3 credit hours. If the student has already completed Mt 31, he should take Mt 144: Matrices and Vector Spaces, 3 credit hours.

3. For teaching general science and mathematics:

Biology (Bl 3, 4: General Zoology 4/4)	8 hours
Chemistry (Ch 3, 4: General Chemistry 4/4)	8
Physics (Ph 3, 4: College Physics 4/4)	8
Mathematics	18
Education	18
Remainder of required courses, minimum	68
Total	128

The eighteen hours of mathematics courses required will consist of Mt 11, 12: College Mathematics I, II, 6 credit hours; Mt 50, 51: Calculus and Geometry I, II, 6 credit hours; and one Topics course in the senior year or after the completion of six hours of Calculus and Geometry I, II, 6 credit hours.

4. For teaching biology and general science:

Biology (Courses listed under 5—b below)	24 hours
Chemistry (Ch 3, 4: General Chemistry 4/4)	8
Physics (Ph 3, 4: College Physics 4/4)	8
Mathematics (Mt 11, 12: College Mathematics I, II, 3/3)	6
Education	18
Remainder of required courses, minimum	64
Total	128

5. For the science comprehensive teaching area:

One science (physics, biology, chemistry)	24 hours
Each of the other two sciences (8 hours each)	16
Mathematics	6*
Education	18
Remainder of required courses, minimum	64
Total	128

*The six hours of mathematics will consist of Mt 31: Algebra and Trigonometry, and Mt 50: Calculus and Geometry I, or Mt 50, 51: Calculus and Geometry I, II, if the student already has Mt 31 or the equivalent when he enters the program. (Students wishing physics as their principal teaching field should also take Mt 104: Differential Equations, 3 credit hours; and Mt 106: Advanced Calculus, 3 credit hours, and the required prerequisites.)

a) If the principal science is physics, the following 24-hour pattern will be followed:

Ph 9, 10 Univ. Physics I, II	3/3 hours
Ph 11, 12 Elec. Circuit, Electronics	4/4
Ph Upper Division physics as determined by the Department	10
Total	24

The student will also include Bl 3, 4: General Zoology, 8 credit hours; and Ch 3, 4: General Chemistry, 8 credit hours.

b) If the principal teaching area is biology, the following 24-hour pattern will be followed:

Bl 3, 4 General Zoology	4/4 hours
Bl 105 Botany	4
Bl 101 Comparative Anatomy	4
Bl 152 Genetics	2
Bl 161 General Physiology	4
Biology elective	2
Total	24

The student will also include Ch 3, 4: General Chemistry, 8 credit hours; and Ph 3, 4: College Physics, 8 credit hours.

c) If the principal teaching area is chemistry, the following 24-hour pattern will be followed:

Ch 3, 4 General Chemistry	4/4 hours
Ch 101-02 Organic Chemistry	4/4
Ch 51 Quant. Inorg. Analysis	4
Ch 121 Elem. Physical Chemistry (No lab.)	3
Chemistry elective	1
Total	24

The student will also include Bl 3, 4: General Zoology, 8 credit hours; and Ph 3, 4: College Physics, 8 credit hours.

THE BACHELOR OF SCIENCE (English)

The Department of English offers training in composition, in the literature of England and of America, in literary backgrounds, and in criticism. The program results in cultural enrichment and in numerous vocational possibilities. It leads to the Bachelor of Science (or of Arts if two years of college Latin are completed).

The following is a regulation passed by the Academic Council:

The violation of any of the ESSENTIALS FOR WRITING (list submitted by the Department of English) in term papers or reports submitted by students to any professor must be penalized by a reduction in grade. Any unsatisfactory term paper or report submitted to any professor must be returned for re-writing and must be automatically penalized by the reduction of one letter in grading, e.g., a B paper automatically becomes a C paper.

En 3, 4: English Composition, required of all students in the University in freshman year, and En 31, 32: Studies in Literature are generally prerequisite to *upper division* courses. Freshmen who intend to major in English ought to enroll in En 13, 14: Rhetoric and Literature. Sophomores who intend to major in English ought to enroll in the higher intensity sections of En 31, 32 as noted on the schedules for each semester.

At the *upper division* level majors must complete the Survey of English Literature to 1750, the Survey of English Literature Since 1750, the Survey of American Literature, Shakespeare, and Aesthetics and Literary Criticism. They must also include an elective course in the English, the American, or the modern novel; another in the modern drama, modern poetry, or the short story; and at least one other course: Chaucer, Milton, Seventeenth Century Literature, Eighteenth Century Literature, the Romantic Movement, Victorian Poetry, or British Prose of the Nineteenth Century. Students planning to teach high school English must include En 101: Advanced Writing. This may replace an elective course. During their junior and senior years majors must work with an assigned member of the department to prepare for the senior comprehensive examination, which is required for graduation.

Minors must take En 142, 143, 180, and one other course of their own choosing, except En 111.

A summary of the curriculum follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
English	12	24	Philosophy	3	15
Minor	6	12	Psychology	3	—
Christian Culture	—	8	Theology	8	—
History	6	—	Science	8	—
Mathematics	6	—	Speech	2	—
Modern Language	6-12	—	Elective	—	6
Military Science	6	—			

B.S. (English)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.	3	En 4 English Comp.	3
Hs 7 Europe to 1500	3	Hs 8 Europe since 1500	3
ML 1 Elem.	3	ML 2 Elem.	3
MS 1 First Year Basic	1	MS 2 First Year Basic	1
Th 40 Christ in the Gospels	2	Th 41 Christ, Our Redeemer	2
Science	4	Science	4
Total	16	Total	16

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 31 Studies in Lit.	3	En 32 Studies in Lit.	3
Mt 11 College Math. I	3	Mt 12 Colleg Math. II	3
ML 31 Interim.	3	ML 32 Interim.	3
MS 31 Second Year Basic	2	MS 32 Second Year Basic	2
Ps 31 Gen. Psychology	3	Pl 34 Logic	3
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
Total	16	Total	16

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage	2	Christian Culture	2
En 142 Survey, Eng. Lit to 1750	3	Pl 105, 106, 107, or 133	3
En 150 Shakespeare	3	En 143 Survey, Eng. Lit. since 1750	3
CA 1 Prin. of Speech	2	En 180 Survey, Amer. Lit.	3
Minor	3	Minor	3
Pl 111 Phil. Psychology	3	Pl 100 Metaphysics	3
Total	16	Total	17

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Christian Culture	2	Pl 132 Pers., Social Ethics	3
En Elective	6	En 111 Aesthetics	3
Minor	3	En Elective	3
Pl 131 Prin. of Ethics	3	Minor	3
Elective	3	Elective	3
Total	17	Total	15

THE BACHELOR OF SCIENCE
(English—Minor: Communication Arts)

Communication Arts (Speech Arts) may be chosen for an undergraduate minor, an Evening College certificate, or an M.Ed. concentration. The student selecting it should seek advisement from his dean.

The undergraduate minor in CA is presented here with an English major since these fields are closely associated.

Requirements for the English major are listed on the two preceding pages. Courses for the minor are CA 1: Principles of Speech; 20: Voice and Phonetics; 40: Oral Interpretation; 100: Public Address; 110: Radio-TV (with laboratory); 130: Speech Therapy; and 140: The Theater (with laboratory). Substitutions may be made with the approval of the chairman of the student's major department. Thus a pre-legal student may substitute a second course in Public Address or in Debating for the courses in Radio-TV or in Speech Therapy.

Communication Arts as a term refers to the ability to communicate, by means of words, what one knows and feels. Usually one's words are spoken, but since all mass media are closely allied with oral communication, courses in journalism and in public relations are also included under Communication Arts.

Specific degree requirements follow:

Subject	Sem. Hrs.			Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
English.....	12	24	Military Science.....	6	—
Communication Arts..	8	12	Philosophy.....	3	15
Christian Culture....	—	8	Psychology.....	3	—
History.....	6	—	Theology.....	8	—
Mathematics.....	6	—	Science.....	8	—
Modern Language... 6-12	—	—			

B.S. (English — Minor: Communication Arts)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.....	3	En 4	English Comp.....	3
Hs 7	Europe to 1500.....	3	CA 1	Speech.....	2
ML 1	Elem.....	3	Hs 8	Europe since 1500....	3
MS 1	First Year Basic.....	1	ML 2	Elem.....	3
Th 40	Christ in the Gospels..	2	MS 2	First Year Basic.....	1
Science.....		4	Th 41	Christ, Our Redeemer..	2
			Science.....		4
Total.....		16	Total.....		18

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 31	Studies in Lit.....	3	En 32	Studies in Lit.....	3
CA 20	Voice, Phonetics.....	3	CA 40	Oral Interp.....	3
Mt 11	College Math. I.....	3	Mt 12	College Math. II.....	3
ML 31	Interm.....	3	ML 32	Interm.....	3
MS 31	Second Year Basic....	2	MS 32	Second Year Basic....	2
Ps 31	Gen. Psychology.....	3	Pl 34	Logic.....	3
Th 42	Christ in His Church..	2	Th 43	Christ in the Soul....	2
Total.....		19	Total.....		19

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
So 125	Marriage.....	2	Minor.....		3
En 142	Survey, Eng. Lit. to 1750.....	3	Christian Culture.....		2
En 150	Shakespeare.....	3	En 143	Survey, Eng. Lit. since 1750.....	3
Minor.....		3	En 180	Survey, Amer. Lit....	3
Pl 111	Phil. Psychology.....	3	Pl 100	Metaphysics.....	3
			Elective or Minor.....		3
Total.....		14	Total.....		17

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Christian Culture.....		2	Pl 132	Pers., Social Ethics...	3
En	Electives.....	9	En	Elective.....	3
Pl 131	Prin. of Ethics.....	3	En 111	Aesthetics.....	3
Minor.....		3	Pl 105, 106, 107, or 133.....		3
			Minor.....		3
Total.....		17	Total.....		15

THE BACHELOR OF SCIENCE (History)

The Bachelor of Science is conferred on the student who majors in history. This program requires seven semester courses beyond Hs 7 and 8, which are prerequisite to all *upper division* work, and includes of necessity Hs 141 and 142, and Hs 194 which must be taken by all history majors in the first semester of their senior year.

History is studied as a liberal art for its primary value of educating one toward proper appreciation of human living. Its memory of man and its insistence on accurate detail, on proof, and on the relation of cause and effect cultivate habits of mature judgment. It helps toward developing due respect and sympathy for others, and supreme regard for the final purpose of life.

Specific degree requirements follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
History.....	6	23	Modern Languages..	6-12	—
Minor.....	6	12	Military Science.....	6	—
Christian Culture....	—	8	Philosophy.....	3	15
Economics*.....	3	—	Science.....	8	—
English.....	12	—	Speech.....	2	—
Mathematics.....	6	—	Theology.....	8	—

*Students minoring in psychology or intending to teach should substitute Ps 31 for economics.

B.S. (History)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.....	3	En 4	English Comp.....	3
Hs 7	Europe to 1500.....	3	Hs 8	Europe since 1500....	3
ML 1	Elem.....	3	ML 2	Elem.....	3
MS 1	First Year Basic.....	1	MS 2	First Year Basic.....	1
Th 40	Christ in the Gospels..	2	Th 41	Christ, Our Redeemer..	2
Science	.....	4	Science	.....	4
Total.....		16	Total.....		16

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 31	Studies in Lit.....	3	En 32	Studies in Lit.....	3
Mt 11	College Math. I.....	3	Mt 12	College Math. II.....	3
ML 31	Interm.....	3	ML 32	Interm.....	3
MS 31	Second Year Basic....	2	MS 32	Second Year Basic....	2
Ec 33	Prin. of Economics...	3	Pl 34	Logic.....	3
Th 42	Christ in His Church..	2	Th 43	Christ in the Soul....	2
Total.....		16	Total.....		16

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
So 125	Marriage.....	2	Christian Culture.....		2
Elective.....		3	Elective.....		3
Hs	Elective.....	6	Hs	Elective.....	6
Minor.....		3	Minor.....		3
Pl 111	Phil. Psychology.....	3	Pl 100	Metaphysics.....	3
Total.....		17	Total.....		17

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Christian Culture.....		2	Pl 132	Pers., Social Ethics...	3
CA 1	Prin. of Speech.....	2	Hs 199	Senior Comp. Rev....	2
Hs 194	Historical Crit.....	3	Hs	Elective.....	3
Hs	Elective.....	3	Elective.....		3
Minor.....		3	Minor.....		3
Pl 131	Prin. of Ethics.....	3	Pl 105, 106, 107, or 133		3
Total.....		16	Total.....		17

THE BACHELOR OF SCIENCE (Mathematics)

The Department of Mathematics offers a program intended to develop exact methods of thought and analysis, provide the mathematical background for work in science and business, and prepare students for teaching and for graduate work.

Sophomores wishing to major in mathematics should have a quality point average of 2.5 or better in Mt 50, 51, and 52. Any student wishing to major in mathematics should consult a member of the mathematics staff before registration.

A minor in mathematics consists of 6-15 hours of *lower division* courses and 6 hours of *upper division* courses.

The program is summarized:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Mathematics.....	6-15	27	Military Science.....	6	—
Minor*.....	6	12	Modern Language...6-12	—	—
Science.....	8	—	Philosophy.....	3	15
Christian Culture....	—	8	Psychology.....	3	—
English.....	12	—	Speech.....	2	—
History.....	6	—	Theology.....	8	—

*The minor may be in such fields as physics, accounting, economics, or English, and must conform to the requirements of those departments.

B.S. (Mathematics)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.....	3	En 4	English Comp.....	3
ML 1	Elem.....	3	ML 2	Elem.....	3
Ps 31	Gen. Psychology.....	3	Mt 51 (or 50).....	3	3
Mt 50 (or 31).....	3	3	Pl 34	Logic.....	3
Hs 7	Europe to 1500.....	3	Hs 8	Europe since 1500....	3
MS 1	First Year Basic.....	1	MS 2	First Year Basic.....	1
Th 40	Christ in the Gospels..	2	Th 41	Christ, Our Redeemer..	2
Total.....		18	Total.....		18

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 31	Studies in Lit.....	3	En 32	Studies in Lit.....	3
ML 31	Interm.....	3	ML 32	Interm.....	3
Mt 52 (or 51).....	3	3	Mt 104	Diff. Equations.....	3
Science.....	4	4	Science.....	4	4
MS 31	Second Year Basic....	2	MS 32	Second Year Basic....	2
Th 42	Christ in His Church..	2	Th 43	Christ in the Soul....	2
Total.....		17	Total.....		17

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
So 125	Marriage.....	2	Christian Culture.....	2	2
Pl 111	Phil. Psychology.....	3	Pl 105, 106, 107, or 133.....	3	3
CA 1	Prin. of Speech.....	2	Pl 100	Metaphysics.....	3
Mt 106	Adv. Calculus.....	3	Mt 145	Modern Algebra.....	3
Mt 144	Matrices, Vect. Spaces	3	Minor.....	3	3
Minor.....	3	3	Total.....		14
Total.....		16	Total.....		14

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Christian Culture.....	2	2	Pl 132	Pers., Social Ethics... 3	3
Pl 131	Prin. of Ethics.....	3	Mt	Elective.....	3
Mt	Elective.....	3	Mt 158	Interm. Analysis....	3
Mt 181	Elem. Topology.....	3	Minor.....	3	3
Minor.....	3	3	Mt	Elective.....	3
Total.....		14	Total.....		15

THE BACHELOR OF SCIENCE (Modern Languages)

The Department of Modern Languages offers programs leading to the Bachelor of Science in French, German, or Spanish. The aim of the department is to teach the language as a means of introducing the student to another culture.

In lower division courses, the objective is reasonable mastery of grammar, syntax, pronunciation and inflection, and the ability to write simple compositions and to read current journals and popular authors. Second year courses concentrate on speaking and comprehension. The course in scientific German, however, stresses reading alone.

Upper division courses stress aural comprehension, oral expression, writing, and reading. The full value is found in a knowledge and appreciation of the literature of the language and of the civilization of the peoples to whom the language is native.

To prepare for the senior comprehensive examination, which is a requirement for graduation, majors and minors will work during the junior and senior years with an assigned member of the department.

An outline of the curriculum follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
French, German, Russian* or Spanish	12	21	Military Science	6	—
Minor	6	12	Philosophy	3	15
Christian Culture	—	8	Psychology	3	—
English	12	—	Science	8	—
History	6	—	Speech	2	—
Mathematics	6	—	Theology	8	—
			Electives	—	9

*Only lower division courses are offered in Russian.

B.S. (Modern Languages)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.	3	En 4	English Comp.	3
Hs 7	Europe to 1500	3	Hs 8	Europe since 1500	3
ML 1	Elem.	3	ML 2	Elem.	3
MS 1	First Year Basic	1	MS 2	First Year Basic	1
Th 40	Christ in the Gospels	2	Th 41	Christ, Our Redeemer	2
Science		4	Science		4
Total		16	Total		16

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 31	Studies in Lit.	3	En 32	Studies in Lit.	3
Mt 11	College Math. I	3	Mt 12	College Math. II	3
ML 31	Interm.	3	ML 32	Interm.	3
MS 31	Second Year Basic	2	MS 32	Second Year Basic	2
Ps 31	Gen. Psychology	3	Pl 34	Logic	3
Th 42	Christ in His Church	2	Th 43	Christ in the Soul	2
Total		16	Total		16

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
So 125	Marriage	2	Christian Culture		2
Minor		3	Minor		3
Fr 101, Gr 101, Sp 101		3	Fr 151, Gr 161, Sp 152		3
Fr 161, Gr 132, Sp 180		3	Fr 162, Gr 133, Sp 181		3
Pl 111	Phil. Psychology	3	Pl 105, 106, 107, or 133		3
Elective		3	Pl 100	Metaphysics	3
Total		17	Total		17

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
CA 1	Prin. of Speech	2	Pl 132	Pers., Social Ethics	3
Christian Culture		2	Major Elective		3
Electives		3	Minor		3
Major Elective		3	Elective		3
Minor		3	Major Elective		3
Pl 131	Prin. of Ethics	3			
Total		16	Total		15

THE BACHELOR OF SCIENCE (Philosophy)

The Bachelor of Science in philosophy is conferred on students who major in philosophy and complete two minors. One minor must be in English, history, a modern language, or a classical language. (Latin qualifies the candidate for the Bachelor of Arts.) The second minor is unspecified.

Students are encouraged to include French and Latin if possible because of their value for advanced study in philosophy.

Departmental requirements in philosophy follow:

A. For all students working for any degree: Pl 34, 100, 111, 131, 132, and one of the following electives: Pl 105, 106, 107, 133.

B. For a major: Pl 34, 100, 106, 107, 111, 131, 132, 133, 151, 161, 199a and b.

Majors in philosophy will come to a recognition of the unity of knowledge and of the nature of mental life and its processes. They will gain the power of reasonable criticism, a realization of the dignity of human nature, and an illumination of the rational foundation of religion.

A summary of the program follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Philosophy.....	3	29	Modern Language.....	6-12	—
Minor 1.....	6	12	Military Science.....	6	—
Minor 2.....	6	12	Psychology.....	3	—
Christian Culture....	—	8	Science.....	8	—
English.....	12	—	Speech.....	2	—
History.....	6	—	Theology.....	8	—
Mathematics.....	6	—	Electives.....	—	9

B.S. (Philosophy)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 3 English Comp.....	3	En 4 English Comp.....	3
Hs 7 Europe to 1500.....	3	Hs 8 Europe since 1500....	3
ML 1 Elem.....	3	ML 2 Elem.....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Science.....	4	Science.....	4
Total.....	16	Total.....	16

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 31 Studies in Lit.....	3	En 32 Studies in Lit.....	3
ML 31 Interim.....	3	Mt 11 College Math. I.....	3
MS 31 Second Year Basic....	2	ML 32 Interim.....	3
Pl 34 Logic.....	3	MS 32 Second Year Basic....	2
Ps 31 Gen. Psychology.....	3	Pl 111 Phil. Psychology.....	3
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
Total.....	16	Total.....	16

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage.....	2	Elective.....	3
Mt 12 College Math. II.....	3	Minors.....	6
Minors.....	6	Pl 106 Natural Theology....	3
Pl 151 or 161.....	3	Pl 131 Prin. of Ethics.....	3
Pl 100 Metaphysics.....	3	Pl 133 Hist. Modern Phil....	3
Total.....	17	Total.....	18

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
CA 1 Prin. of Speech.....	2	Christian Culture.....	2
Minors.....	6	Electives.....	6
Pl 107 Phil. of Knowledge....	3	Minors.....	6
Pl 132 Pers., Social Ethics....	3	Pl 199b Senior Comp. Rev....	1
Pl 151 or 161.....	3		
Pl 199a Senior Comp. Rev....	1		
Total.....	18	Total.....	15

THE BACHELOR OF SCIENCE (Physics)

The Department of Physics offers a curriculum leading to the Bachelor of Science in physics.

The educational benefits to be derived from a study of the science of physics are training in scientific method, acquaintance with the historical development of physical science, and a knowledge of the applications of physical laws which play so large a part in modern life. In all physics courses emphasis is laid on the intelligent comprehension of basic principles rather than on study of outmoded applications.

All physics majors are required to take a minimum of forty-six semester hours of physics. These hours must include six hours of Modern Physics (relativity theory, atomic physics, quantum theory), six hours of Mechanics, three hours of Electromagnetism, three hours of Thermodynamics, six hours of Advanced Laboratory, and fourteen hours of University Physics.

Physics minors must take a minimum of twenty semester hours which include the eight-hour general physics course, three hours of Mechanics, and six hours of Modern Physics.

All freshman physics majors must take the algebra and trigonometry examinations conducted by the mathematics department during freshman orientation week. The courses listed on the following page are for those freshmen who pass only one of these examinations. If both tests are passed, Mt 50 should be taken in the first semester of freshman year. This advances each mathematics course one semester and allows the student to take more physics later, or some other elective.

With approval of the Departments of Chemistry and of Physics six credit hours in physical chemistry may be counted toward a major in physics.

In cooperation with the Graduate School, the Department of Physics offers the following sequence of courses for teachers or prospective teachers who wish to obtain a concentration in physics: Ph 162, 174, 175, 176, and 177.

The minimum requirements follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Physics	14	32	Military Science	6	—
Mathematics	6-15	6	Modern Language	6-12	—
Chemistry	8	—	Philosophy	3	15
Christian Culture	—	8	Speech	2	—
English	12	—	Theology	8	—
History	6	—			

B.S. (Physics)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 3 General Chemistry	4	Ch 4 General Chemistry	4
En 3 English Comp.	3	En 4 English Comp.	3
Mt 31 Algebra, Trigonometry	3	Mt 50 Calculus, Geom. I	3
CA 1 Prin. of Speech	2	Ph 10 Univ. Physics II	3
Ph 9 Univ. Physics I	3	Pl 34 Logic	3
MS 1 First Year Basic	1	MS 2 First Year Basic	1
Th 40 Christ in the Gospels	2	Th 41 Christ, Our Redeemer	2
Total	18	Total	19

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
En 31 Studies in Lit.	3	En 32 Studies in Lit.	3
Ru 1 Elem.†	3	Ru 2 Elem.	3
Mt 51 Calculus, Geom. II	3	Mt 52 Calculus, Geom. III	3
MS 31 Second Year Basic	2	MS 32 Second Year Basic	2
Ph 11 Elec. Circuits, Lect., Lab.	4	Ph 12 Electronics, Lect., Lab.	4
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
Total	17	Total	17

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
So 125 Marriage	2	Christian Culture	2
Ru 31 Intern.	3	Ru 32 Intern.	3
Mt 106 Advanced Calculus	3	Mt 104 Diff. Equations	3
Pl 111 Phil. Psychology	3	Pl 100 Metaphysics	3
Ph 111 Theoret. Mechanics	3	Ph 102 Adv. Laboratory	2
Ph 101 Adv. Laboratory	2	Ph 112 Theoret. Mechanics	3
Ph 141 Electromagnetism	3	Ph 142 E. M. Theory of Light	3
Total	19	Total	19

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Christian Culture	2	Hs 8 Europe since 1500	3
Hs 7 Europe to 1500	3	Pl 105, 106, 107, or 183	3
Pl 131 Prin. of Ethics	3	Pl 132 Pers., Social Ethics	3
Ph 164 Modern Physics I	3	Ph 165 Modern Physics II	3
Ph 103 Adv. Physics Lab.	1	Ph 104 Adv. Physics Lab.	1
Ph Elective	3	Ph 121 Thermodynamics	3
Ph 199a Senior Comp. Rev.	1	Ph 199b Senior Comp. Rev.	1
Total	16	Total	17

*If a student has advanced standing in algebra, he may register for Mt 50: Calculus. This advances each mathematics course one semester. Another possibility is to substitute Pl 34: Logic for the advanced standing course.

†The student is advised to elect Russian because much of the new literature on the subject of physics is in that tongue.

THE BACHELOR OF SCIENCE (Political Science)

The Department of History and Political Science offers the Bachelor of Science in political science. The program demands seven courses beyond Po 1, 2 and includes as required Po 131, 132, and 199.

Political science aims to produce a deep understanding of the functions and processes of political power, of the place of authority in society, of the use of freedom in human relations. Regard for institutional practice, to conserve freedom and employ sound social forces toward the perfecting of political action, is a prime purpose in this field. The American constitutional system will be given particular attention.

A summary of the program follows:

<i>Sem. Hrs.</i>		<i>Sem. Hrs.</i>	
<i>Subject</i>	<i>L.D. U.D.</i>	<i>Subject</i>	<i>L.D. U.D.</i>
Political Science.....	6 23	Military Science.....	6 —
Minor.....	6 12	Philosophy.....	3 15
Christian Culture....	— 8	Psychology or	
English.....	12 —	Economics.....	3 —
History.....	6 —	Science.....	8 —
Mathematics.....	6 —	Speech.....	2 —
Modern Language...6-12	—	Theology.....	8 —

B.S. (Political Science)

Freshman Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
En 3 English Comp.....	3	En 4 English Comp.....	3
Hs 7 Europe to 1500.....	3	Hs 8 Europe since 1500....	3
ML 1 Elem.....	3	ML 2 Elem.....	3
Science.....	4	Science.....	4
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Total.....	16	Total.....	16

Sophomore Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Po 1 Govt. in Society.....	3	Po 2 American Govt.....	3
En 31 Studies in Lit.....	3	En 32 Studies in Lit.....	3
ML 31 Interm.....	3	ML 32 Interm.....	3
Ec 33 Prin. of Economics or		Pl 34 Logic.....	3
Ps 31 Psychology.....	3	Th 43 Christ in the Soul....	2
Th 42 Christ in His Church..	2	MS 32 Second Year Basic....	2
MS 31 Second Year Basic....	2		
Total.....	16	Total.....	16

Junior Year

<i>First Semester</i>	<i>Sem. Hrs.</i>	<i>Second Semester</i>	<i>Sem. Hrs.</i>
Po 131 Anc. and Med.		Po 132 Mod. Pol. Phil.....	3
Pol. Phil.....	3	Po Elective.....	3
Po Elective.....	3	Minor.....	3
Minor.....	3	Pl 100 Metaphysics.....	3
Pl 111 Phil. Psychology.....	3	Christian Culture.....	2
So 125 Marriage.....	2	Mt 12 College Math. II....	3
Mt 11 College Math. I.....	3		
Total.....	17	Total.....	17

Senior Year

<i>First Semester</i>		<i>Sem. Hrs.</i>	<i>Second Semester</i>		<i>Sem. Hrs.</i>
Po	Elective.....	3	Po 148	Const. Hist. of U. S.	3
CA 1	Prin. of Speech.....	2	Po 199	Senior Comp. Rev.	2
Minor.	.....	3	Po	Elective.....	3
Pl 131	Prin. of Ethics.....	3	Minor.	.....	3
CC	Christian Culture.....	2	Pl 132	Pers., Social Ethics	3
Elective.....	.....	3	Pl 105, 106, 107, or 133	3	3
Total.....		16	Total.....		17

THE BACHELOR OF SCIENCE (Psychology)

The Department of Psychology endeavors to acquaint students thoroughly with the content and methods of scientific psychology. While emphasizing the scientific approach in the understanding of human behavior and human personality, the psychology courses aim to show to the student that this branch of science is complementary to and compatible with a sound philosophy of human nature. In addition to the program leading to the Bachelor of Science in Psychology, the Department provides service courses to majors of other departments. The Bachelor of Science program in psychology aims to provide a general background for advanced studies in fields which presuppose understanding of human psychology such as clinical psychology, vocational and educational guidance, medicine, education, social work, and personnel work in business and industry.

Departmental requirements for a major are:

1. Completion of Ps 31 and 32 as an introduction to *upper division* work.
2. Twenty-seven credit hours in *upper division* courses including Ps 101, 102, 111, 199.
3. Twelve credit hours in French or German, unless substitution of another foreign language is approved by the Chairman of the Department of Psychology.
4. Satisfactory completion of Bl 3 and 4 to fulfill the science requirement, unless substitution of other science courses is approved by the Chairman of the Department of Psychology.

Departmental requirements for a minor include:

1. Completion of Ps 31 and 32 or 41.
2. Completion of fifteen credit hours in upper division work including Ps 111.

A summary of program requirements follows:

Sem. Hrs.		Subject	Sem. Hrs.	
L.D.	U.D.		L.D.	U.D.
Psychology	6 27	Modern Language	6-12	—
Minor	6 12*	Military Science	6	—
Christian Culture	— 8	Philosophy	3	15
English	12 —	Theology	8	—
History	6 —	Science	8	—
Mathematics	6 —	Speech	2	—

*Minors in science are required to complete 16 hours.

B.S. (Psychology)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
En 3	English Comp.	3	En 4	English Comp.	3
Hs 7	Europe to 1500	3	Hs 8	Europe since 1500	3
Mt 11 (or 31)		3	Mt 12 (or 50)		3
MS 1	First Year Basic	1	MS 2	First Year Basic	1
Th 40	Christ in the Gospels	2	Th 41	Christ, Our Redeemer	2
Bl 3	General Zoology	4	Bl 4	General Zoology	4
Total		16	Total		16

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
ML 1	Elem.	3	ML 2	Elem.	3
MS 31	Second Year Basic	2	MS 32	Second Year Basic	2
En 31	Studies in Lit.	3	En 32	Studies in Lit.	3
Ps 31	Gen. Psychology	3	Ps 111	Phil. Psychology	3
Th 42	Christ in His Church	2	Th 43	Christ in the Soul	2
Pl 34	Logic	3	Ps 32	Adv. Gen. Psychology	3
Total		16	Total		16

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
So 125	Marriage	2	Christian Culture		2
Minor		3	Minor		3
ML 31	Interm.	3	ML 32	Interm.	3
Pl 100	Metaphysics	3	Pl 131	Prin. of Ethics	3
Ps 101	Experimental I	3	Ps 102	Experimental II	3
Ps	Elective	3	Ps	Elective	3
Total		17	Total		17

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
CA 1	Prin. of Speech	2	Christian Culture		2
Elective		3	Elective		3
Minor		3	Minor		3
Pl 132	Pers., Social Ethics	3	Pl 105, 106, 107, or 133		3
Ps	Elective	6	Ps	Elective	4
Total		17	Total		17

THE BACHELOR OF SCIENCE (Natural Sciences)

(For Pre-Medical and Pre-Dental Students)

The curriculum for pre-medical and pre-dental students presents a liberal arts program with emphasis on those sciences required for an adequate background for subsequent studies in medicine, in dentistry, and in similar professions. Recurrent pronouncements by Committees on Admissions at professional schools leave no doubt that they regard an education in the liberal arts as one of the most important factors in forming a genuinely capable and effective professional man.

Pre-medical students are advised to plan a four year course. The University proposes the following program:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Biology.....	8	10	Philosophy.....	3	15
Chemistry.....	13	11	Physics.....	8	—
Christian Culture....	—	8	Psychology.....	3	—
English.....	12	—	Science elective.....	—	3-6
German.....	6-12	—	Speech.....	2	—
History.....	6	—	Theology.....	8	—
Mathematics.....	6	—	Thesis.....	—	2
Military Science.....	6	—	Elective.....	3	—

B.S. (Natural Sciences) (For Pre-Medical and Pre-Dental Students)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 3 Gen. Zoology.....	4	Bl 4 Gen. Zoology.....	4
Ch 3 General Chemistry...	4	Ch 4 General Chemistry...	5
En 3 English Comp.....	3	En 4 English Comp.....	3
Mt 31 (or 11).....	3	Mt 50 (or 12).....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	17	Total.....	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 51 Elem. Quan. Analysis..	4	Bl 152 Genetics.....	2
Hs 7 Europe to 1500.....	3	Hs 8 Europe since 1500....	3
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
Ph 3 College Physics.....	4	Ph 4 College Physics.....	4
Pl 34 Logic.....	3	Pl 111 Phil. Psychology.....	3
Th 42 Christ in His Church..	2	Ps 31 Gen. Psychology.....	3
		Th 43 Christ in the Soul....	2
Total.....	18	Total.....	19

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 101 Compar. Anat. Vert....	4	Bl 112 Gen., Vert. Embry....	4
So 125 Marriage.....	2	Christian Culture.....	2
Ch 101 Organic Chemistry...	4	Ch 102 Organic Chemistry...	4
Gr 1 Elem.*.....	3	Gr 2 Elem.....	3
Pl 100 Metaphysics.....	3	Pl 105, 106, 107, or 133....	3
CA 1 Prin. of Speech.....	2	Ch 190 Chem. Literature†....	1
Total.....	18	Total.....	17

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 121 Elem. Phys. Chem. Lect.....	3	Ch 160 Biochem. Lecture (Optional)†.....	3
En 31 Studies in Lit.....	3	En 32 Studies in Lit.....	3
Gr 31 Interm.....	3	Gr 32 Interm.....	3
Pl 131 Prin. of Ethics.....	3	Pl 132 Pers., Social Ethics...	3
Science.....	3-4	Science†.....	3-4
Bl or Ch 199a Senior Thesis..	1	Bl or Ch 199b Senior Thesis..	1
		Christian Culture.....	2
Total.....	16-17	Total.....	18-19

*The student is advised to elect German as his modern language because of the literature in German on scientific matters.

†Required of those who plan to concentrate in chemistry.

‡Required of those who plan to concentrate in biology.

PRE-DENTAL CURRICULUM

The Council on Dental Education of the American Dental Association fixes as the minimum basis for admission to an approved dental school the successful completion of two years in an accredited college of liberal arts and sciences. The course must include at least a year's credit in English, in biology, in physics, and in inorganic chemistry, and a semester's credit in organic chemistry. Courses in science should include both class and laboratory instruction. Formal credit in these subjects, except in chemistry or in English, may be waived in the case of exceptional students with three years of college credit or in the case of degree graduates of an accredited college.

The applicant must also have graduated from an accredited four year high school, which requires not less than fifteen units.

Only young men in good physical condition should seek entrance into the dental schools. As a requirement for admission a prospective student must furnish a certificate of health from a physician. This must include a report on a chest x-ray, satisfactory condition of heart, of eyes, and of the motor system.

Since entrance requirements vary, the student should decide early upon the school he wishes to attend and should plan his program to conform to its requirements. Rarely is one who presents only minimum academic preparation accepted unless his work has been of superior quality. Fulfillment of the requirements for the Bachelor's degree is advisable.

A summary of *minimum* requirements follows:

Subject	Sem. Hrs.	Subject	Sem. Hrs.
Biology.....	8	Military Science.....	6
Chemistry.....	21	Philosophy.....	6
English.....	6	Physics.....	8
History.....	6	Theology.....	8
Mathematics.....	6		

Pre-Dental (Three-Year Course)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 3 General Zoology.....	4	Bl 4 General Zoology.....	4
Ch 3 General Chemistry...	4	Ch 4 General Chemistry...	5
En 3 English Comp.....	3	En 4 English Comp.....	3
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Mt 50 (or 31).....	3	Mt 51 (or 50).....	3
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
Total.....	17	Total.....	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ch 51 Elem. Quan. Analysis..	4	Hs 8 Europe since 1500....	3
Hs 7 Europe to 1500.....	3	MS 32 Second Year Basic....	2
MS 31 Second Year Basic....	2	Pl 100 Metaphysics.....	3
Ph 3 College Physics.....	4	Pl 111 Phil. Psychology.....	3
Pl 34 Logic.....	3	Ph 4 College Physics.....	4
Th 42 Christ in His Church..	2	Ps 31 Gen. Psychology.....	3
Total.....	18	Th 43 Christ in the Soul....	2
		Total.....	20

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Bl 101 Comp. Anat. of Vert..	4	Ch 102 Organic Chemistry...	4
So 125 Marriage.....	2	En 32 Studies in Lit.....	3
Ch 101 Organic Chemistry...	4	CA 1 Prin. of Speech.....	2
En 31 Studies in Lit.....	3	Pl 132 Pers., Social Ethics...	3
Pl 131 Prin. of Ethics.....	3	Elective.....	3-4
Total.....	16	So 126 Family.....	2
		Total.....	17-18

PRE-LEGAL STUDY

Though many law schools admit students after three years of undergraduate study, Ohio law schools and certain others require four years of college work. All students who intend to take the Ohio Bar Examination must have a college degree before beginning the study of law.

American law schools do not prescribe specific subjects for pre-law study, but a liberal arts course is highly recommended. Theology and philosophy, history, the social sciences and languages, mathematics, the natural sciences, and the arts—all are valuable for the future lawyer in developing a sound philosophy of life, intellectual maturity and discipline, and a well-rounded background.

Law schools place great emphasis on the basic ability to use the English language well in reading, in speaking, and especially in writing. One or two courses in accounting should be included in a pre-law program.

Students interested in a career in law should consult a member of the Xavier University Pre-Legal Committee. They are also urged to join the St. Thomas More Pre-Law Society.

THE BACHELOR OF LITERATURE

(For Humanistic Studies at Milford College)

The degree of Bachelor of Literature is conferred on candidates from Milford College whose major and minor have been in the curricular field of classical languages and English, and whose program has included the following subjects and corresponding semester hours:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Latin	10	20	Modern Language	6-12	—
Greek	6	12	Math. or Science	6	—
English	9-12	12-15	Speech	4	—
Education	3	3	Theology	8	—
History	6	—	Electives	—	11-23

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

(Offered in General Business in the Evening College only)

This B.S.B.A. program for Evening College students requires the following non-business subjects:

Subject	Sem. Hrs.	Subject	Sem. Hrs.
English	12	Philosophy	18
History	6	Psychology	3
Mathematics	6	Speech	2
Science	8	Theology	8
		Christian Culture	2-4

Non-Catholics will substitute appropriate courses approved by the Dean for the Theology requirement.

The following specific courses in Business Administration are required:

Accounting:

Course No.	Subject	Sem. Hrs.
Ac 51, 52	Principles	6
Ac 166	Financial Statements	3

Business Administration:

BA 23	Business Correspondence	2
BA 190	Statistics	3
BA 193, 194	Business Law	6
BA 199	Senior Comprehensive	2
Mg 90	Management Principles	3
Mg 108	Management Research	3
Mg/IR 115	Personnel Management	3
Mk 70	Marketing Principles	3
Mk 186	Sales Management	3
IR 130	Labor Economics	3
IR	Elective	3
BA or Ec	Electives	6

Economics:

Ec 33, 34	Principles	6
Ec 132	Economic Theory and Christian Thought	2
Ec/Fi 150	Money and Banking	3
Ec/Fi 160	Business Finance	3

Degree Programs— The College of Business Administration

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Accounting)

The program in accounting is designed to provide intensive training of a comprehensive nature for the adequate preparation of public, private or industrial accountants; auditors; credit analysts and general business executives. The advanced courses which elaborate on the theory and practice of accounts, business analysis, costs, auditing and specialized accounting culminate in preparation for C.P.A. examinations and for actual entrance into the field of public accountancy.

Students majoring in accounting must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Ac 51, 52	Principles of Accounting	6
Ac 151, 152	Intermediate Accounting	6
Ac 153	Advanced Accounting Problems	3
Ac 155, 156	Industrial Accounting	6
Ac	Electives	6
BA 190	Business Statistics	3
BA 193, 194	Business Law	6
BA 196	Business Administration Problems	3
Ec 33, 34	Principles of Economics	6
Ec 140	Economic History of the United States	3
Fi 150	Money and Banking	3
IR 130	Labor Economics	3
Mg 90	Principles of Management	3
Mk 70	Principles of Marketing	3
Total		60

The required curriculum for the degree follows:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Accounting	6	21	Marketing	3	—
Business Administration	—	12	Mathematics	6	—
Christian Culture	—	8	Military Science	6	—
Economics	6	3	Philosophy	3	15
English	12	—	Psychology	3	—
Finance	—	3	Science	8	—
History	6	—	Speech	2	—
Management and Indus. Rel.	3	3	Theology	8	—

B.S.B.A. (Accounting)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 51 Prin. of Accounting	3	Ac 52 Prin. of Accounting	3
Ec 33 Prin. of Economics	3	Ec 34 Prin. of Economics	3
Hs 7 Europe to 1500	3	Hs 8 Europe since 1500	3
Mt 21 Math. of Economics	3	Mt 22 Math. of Finance	3
En 3 English Comp.	3	En 4 English Comp.	3
Th 40 Christ in the Gospels	2	Th 41 Christ, Our Redeemer	2
MS 1 First Year Basic	1	MS 2 First Year Basic	1
Total	18	Total	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mk 70 Prin. of Marketing	3	Mg 90 Prin. of Management	3
Ac 151 Interm. Accounting	3	Ac 152 Interm. Accounting	3
En 31 Studies in Lit.	3	En 32 Studies in Lit.	3
Ps 31 General Psychology	3	Pl 34 Logic	3
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
MS 31 Second Year Basic	2	MS 32 Second Year Basic	2
		CA 1 Prin. of Speech	2
Total	16	Total	18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 155 Indus. Accounting	3	Ac 156 Indus. Accounting	3
BA 193 Business Law I	3	BA 194 Business Law II	3
Ac Elective	3	Ec 150 Money and Banking	3
		Science	4
Pl 111 Phil. Psychology	3	Pl 100 Metaphysics	3
So 125 Marriage	2		
Total	18	Total	16

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 153 Adv. Probs.	3	BA 190 Business Statistics	3
Ac Elective	3	BA 196 Bus. Admin. Probs.	3
IR 130 Labor Economics	3	Ec 140 Econ. History, U. S.	3
Pl 131 Prin. of Ethics	3	Pl 132 Pers., Social Ethics	3
Christian Culture (Ec 132 Recommended)	3	Pl 105, 106, 107, or 133	3
Total	15	Total	15

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Economics)

This Bachelor of Science in Business Administration provides the student with basic principles and procedures fundamental to the intellectual analysis of economic problems of the individual firm, industry, and the economy as a whole. Such training prepares the student to recognize the problem, to analyze it objectively, and to offer a proper solution. The program is beneficial to those who wish to assume positions as economists, either private or public; business analysts; investment analysts; business executives; and labor leaders. It encourages them not only to solve individual problems, but to analyze the monetary and fiscal policy of the government in relation to its effects on the total economy.

Students working for the B.S.B.A. (Economics) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Ec 33, 34	Principles of Economics	6
Ec 130	Labor Economics	3
Ec 132	Economic Theory and Social Order	3
Ec 133	Microeconomic Analysis	3
Ec 134	Macroeconomic Analysis	3
Ec 139	History of Economic Thought	3
Ec 140	Economic History of U. S.	3
Ec	Electives	6
Ac 51, 52	Principles of Accounting	6
Mk 70	Principles of Marketing	3
Mg 90	Principles of Management	3
Fi 150	Money and Banking	3
Fi 160	Business Finance	3
BA 190	Business Statistics	3
BA 193, 194	Business Law	6
BA 196	Business Administration Problems	3
Total		60

Prescribed subjects and credit hours required for the B.S.B.A. (Economics) follow:

Subject	Sem. Hrs. L.D. U.D.	Subject	Sem. Hrs. L.D. U.D.
Accounting	6 —	Marketing	3 —
Business Administration	— 12	Mathematics	6 —
Christian Culture	— 8	Military Science	6 —
Economics	6 24	Philosophy	3 15
English	12 —	Psychology	3 —
Finance	— 6	Science	8 —
History	6 —	Speech	2 —
Management and I.R.	3 —	Theology	8 —

B.S.B.A (Economics)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 51 Prin. of Accounting	3	Ac 52 Prin. of Accounting	3
Ec 33 Prin. of Economics	3	Ec 34 Prin. of Economics	3
Hs 7 Europe to 1500	3	Hs 8 Europe since 1500	3
Mt 21 Math. of Economics	3	Mt 22 Math. of Finance	3
En 3 English Comp.	3	En 4 English Comp.	3
Th 40 Christ in the Gospels	2	Th 41 Christ, Our Redeemer	2
MS 1 First Year Basic	1	MS 2 First Year Basic	1
Total	18	Total	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mk 70 Prin. of Marketing	3	Mg 90 Prin. of Management	3
Ec 130 Labor Economics	3	Fi 160 Business Finance	3
En 31 Studies in Lit.	3	En 32 Studies in Lit.	3
Ps 31 Gen. Psychology	3	Pl 34 Logic	3
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
MS 31 Second Year Basic	2	MS 32 Second Year Basic	2
		CA 1 Prin. of Speech	2
Total	16	Total	18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 140 Econ. Hist. of U. S.	3	Ec 150 Money and Banking	3
BA 193 Business Law I	3	BA 194 Business Law II	3
Ec Elective	3	Ec Elective	3
Science	4	Science	4
Pl 111 Phil. Psychology	3	Pl 100 Metaphysics	3
So 125 Marriage	2		
Total	18	Total	16

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec Elective	3	BA 196 Bus. Admin. Probs.	3
BA 190 Business Statistics	3	Ec 134 Macroecon. Analysis	3
Ec 132 Econ. Theory and Social Order	3	Ec 139 Hist. Econ. Thought	3
Ec 133 Microecon. Analysis	3	Pl 132 Per., Social Ethics	3
Pl 131 Prin. of Ethics	3	Pl 105, 106, 107, or 133	3
Total	15	Total	15

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Finance)

The Bachelor of Science in Business Administration program in finance develops an appreciation in the student of financial management and financial operation. Every one majoring in finance must take three basic courses designed to acquaint him with the various financial records of the firm, the character and appraisal of corporate securities, and the financial techniques applicable to the various phases of this discipline. In addition, the student may choose elective subjects. This permits him to aim at a particular segment of finance such as corporate finance, security sales, etc. Certain courses are offered each semester. Others are cycled every other semester or every other year to provide the greatest diversification possible. Majors in finance will be offered opportunities to inspect various financial institutions and to meet with professionals in the field.

Students working for the B.S.B.A. (Finance) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Fi 150	Money and Banking	3
Fi 155	Investments	3
Fi 160	Business Finance	3
Fi 168	Seminar in Finance	3
Fi 195	Cases and Problems in Finance	3
Fi	Electives	9
Ac 51, 52	Principles of Accounting	6
Ec 33, 34	Principles of Economics	6
Ec 140	Economic History of U. S.	3
Mk 70	Principles of Marketing	3
Mg 90	Principles of Management	3
IR 130	Labor Economics	3
BA 190	Business Statistics	3
BA 193, 194	Business Law	6
BA 196	Business Administration Problems	3
Total		60

Prescribed subjects and credit hours required for the B.S.B.A. (Finance) follow:

Subject	Sem. Hrs.		Subject	Sem. Hrs.	
	L.D.	U.D.		L.D.	U.D.
Accounting	6	—	Management and I.R.	3	3
Business Administration	—	12	Marketing	3	—
Christian Culture	—	8	Mathematics	6	—
Economics	6	3	Military Science	6	—
English	12	—	Philosophy	3	15
Finance	—	24	Psychology	3	—
History	6	—	Science	8	—
			Speech	2	—
			Theology	8	—

B.S.B.A. (Finance)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Ac 51	Prin. of Accounting	3	Ac 52	Prin. of Accounting	3
Ec 33	Prin. of Economics	3	Ec 34	Prin. of Economics	3
Hs 7	Europe to 1500	3	Hs 8	Europe since 1500	3
Mt 21	Math. of Economics	3	Mt 22	Math. of Finance	3
En 3	English Comp.	3	En 4	English Comp.	3
Th 40	Christ in the Gospels	2	Th 41	Christ, Our Redeemer	2
MS 1	First Year Basic	1	MS 2	First Year Basic	1
Total		18	Total		18

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Mk 70	Prin. of Marketing	3	Mg 90	Prin. of Management	3
Fi 160	Bus. Finance	3	Ec 130	Labor Economics	3
En 31	Studies in Lit.	3	En 32	Studies in Lit.	3
Ps 31	Gen. Psychology	3	Pl 34	Logic	3
Th 42	Christ in His Church	2	Th 43	Christ in the Soul	2
MS 31	Second Year Basic	2	MS 32	Second Year Basic	2
			CA 1	Prin. of Speech	2
Total		16	Total		18

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Fi 150	Money and Banking	3	Fi	Electives*	3
Fi 155	Investments	3	BA 190	Bus. Statistics	3
Ba 193	Business Law I	3	BA 194	Bus. Law II	3
	Science	4		Science	4
Pl 111	Phil. Psychology	3	Pl 100	Metaphysics	3
So 125	Marriage	2			
Total		18	Total		16

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Ec 140	Econ. History, U. S.	3	BA 196	Bus. Admin. Probs.	3
Fi 195	Cases, Probs. in Finance	3	Fi 168	Seminar in Finance	3
Fi	Elective	3	Fi	Elective	3
Pl 131	Prin. of Ethics	3	Pl 132	Pers., Social Ethics	3
	Christian Culture (Ec 132 Recommended)	3	Pl 105, 106, 107, or 133		3
Total		15	Total		15

*Ac 151 and 152 are recommended for Finance majors intending to seek industrial employment.

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Industrial Relations)

In an industrial society which is becoming increasingly more complex and interdependent, the need for leaders in the area of industrial relations with a well-rounded professional training is a necessity. This program is designed to provide specific knowledge of labor and is supported by strong cultural background in the liberal arts. Concentration in industrial relations will acquaint the student with the economic, social, political, and psychological aspects of labor problems and relations. It, also, prepares him for further academic study and for positions in government, industry, or the labor movement.

Students working for the B.S.B.A. (Industrial Relations) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Mg 90	Principles of Management.....	3
IR 115	Personnel Administration.....	3
IR 116	Labor Relations.....	3
IR 128	Industrial Psychology.....	3
IR 130	Labor Economics.....	3
IR	Electives.....	9
Ac 51, 52	Principles of Accounting.....	6
Mk 70	Principles of Marketing.....	3
Ec 33, 34	Principles of Economics.....	6
Ec 140	Economic History of U. S.....	3
Fi 150	Money and Banking.....	3
Fi 160	Business Finance.....	3
BA 190	Business Statistics.....	3
BA 193, 194	Business Law.....	6
BA 196	Business Administration Problems.....	3
Total.....		60

Prescribed subjects and credit hours required for the B.S.B.A. (Industrial Relations) follow:

Subject		Sem. Hrs.	Subject		Sem. Hrs.
		L.D. U.D.			L.D. U.D.
Accounting.....	6	—	Marketing.....	3	—
Business Admin.....	—	12	Mathematics.....	6	—
Christian Culture.....	—	8	Military Science.....	6	—
Economics.....	6	3	Philosophy.....	3	15
English.....	12	—	Psychology.....	3	—
Finance.....	—	6	Science.....	8	—
History.....	6	—	Speech.....	2	—
Management and I.R.....	3	21	Theology.....	8	—

B.S.B.A. (Industrial Relations)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 51 Prin. of Accounting...	3	Ac 52 Prin. of Accounting...	3
Ec 33 Prin. of Econ.....	3	Ec 34 Prin. of Economics...	3
Hs 7 Europe to 1500.....	3	Hs 8 Europe since 1500...	3
Mt 21 Math. of Economics...	3	Mt 22 Math. of Finance.....	3
En 3 English Comp.....	3	En 4 English Comp.....	3
Th 40 Christ in the Gospels..	2	Th 41 Christ, Our Redeemer..	2
MS 1 First Year Basic.....	1	MS 2 First Year Basic.....	1
Total.....		18	

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mg 90 Prin. of Management..	3	Mk 70 Prin. of Marketing...	3
Ec 130 Labor Economics.....	3	Fi 160 Business Finance.....	3
En 31 Studies in Lit.....	3	En 32 Studies in Lit.....	3
Ps 31 Gen. Psychology.....	3	Pl 34 Logic.....	3
Th 42 Christ in His Church..	2	Th 43 Christ in the Soul....	2
MS 31 Second Year Basic....	2	MS 32 Second Year Basic....	2
		CA 1 Prin. of Speech.....	2
Total.....		16	

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
IR 115 Personnel Admin.....	3	IR 116 Labor Relations.....	3
BA 193 Business Law I.....	3	BA 194 Business Law II....	3
IR Elective.....	3	BA 190 Business Statistics...	3
Science.....	4	Science.....	4
Pl 111 Phil. Psychology.....	3	Pl 100 Metaphysics.....	3
So 125 Marriage.....	2		
Total.....		16	

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
IR 128 Indus. Psychology....	3	BA 196 Bus. Admin. Probs...	3
Ec 140 Econ. History, U. S....	3	Ec 150 Money and Banking..	3
IR Elective.....	3	IR Elective.....	3
Pl 131 Prin. of Ethics.....	3	Pl 132 Pers., Social Ethics...	3
Christian Culture (Ec 132 Recommended)...	3	Pl 105, 106, 107, or 133....	3
Total.....		15	

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Management)

Contributions of the business world to society are largely dependent on good management.

The objectives of this program are to facilitate such contributions by:

1. Providing specialized professional training in the principles and the practices for the effective operation of the business organization.
2. Stimulating the application of sound philosophical principles to the wide range of problems encountered by management.
3. Aiding in the development of the student's intellect and personality to prepare him for leadership in society.

Students working for the B.S.B.A. (Management) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Mg 90	Principles of Management.....	3
Mg 115	Personnel Administration.....	3
Mg 116	Labor Relations.....	3
Mg	Electives.....	12
Ac 51, 52	Principles of Accounting.....	6
Ec 33, 34	Principles of Economics.....	6
Mk 70	Principles of Marketing.....	3
IR 130	Labor Economics.....	3
Ec 140	Economic History of U. S.....	3
Fi 150	Money and Banking.....	3
Fi 160	Business Finance.....	3
BA 190	Business Statistics.....	3
BA 193, 194	Business Law.....	6
BA 196	Business Administration Problems.....	3
Total.....		60

Prescribed subjects and credit hours required for the B.S.B.A. (Management) follow:

Subject		Sem. Hrs.		Subject		Sem. Hrs.	
		L.D.	U.D.			L.D.	U.D.
Accounting.....		6	—	Marketing.....		3	—
Business Admin.....		—	12	Mathematics.....		6	—
Christian Culture.....		—	8	Military Science.....		6	—
Economics.....		6	3	Philosophy.....		3	15
English.....		12	—	Psychology.....		3	—
Finance.....		—	6	Science.....		8	—
History.....		6	—	Speech.....		2	—
Management and I.R.....		3	21	Theology.....		8	—

B.S.B.A. (Management)

Freshman Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Ac 51	Prin. of Accounting...	3	Ac 52	Prin. of Accounting...	3
Ec 33	Prin. of Economics...	3	Ec 34	Prin. of Economics...	3
Hs 7	Europe to 1500.....	3	Hs 8	Europe since 1500....	3
Mt 21	Math. of Economics...	3	Mt 22	Math. of Finance.....	3
En 3	English Comp.....	3	En 4	English Comp.....	3
Th 40	Christ in the Gospels..	2	Th 41	Christ, Our Redeemer..	2
MS 1	First Year Basic.....	1	MS 2	First Year Basic.....	1
Total.....		18	Total.....		18

Sophomore Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Mg 90	Prin. of Management..	3	Mk 70	Prin. of Marketing....	3
Ec 130	Labor Economics.....	3	Fi 160	Business Finance.....	3
En 31	Studies in Lit.....	3	En 32	Studies in Lit.....	3
Ps 31	Gen. Psychology.....	3	Pl 34	Logic.....	3
Th 42	Christ in His Church..	2	Th 43	Christ in the Soul....	2
MS 31	Second Year Basic....	2	MS 32	Second Year Basic....	2
			CA 1	Prin. of Speech.....	2
Total.....		16	Total.....		18

Junior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Mg 115	Personnel Admin.....	3	Mg 116	Labor Relations.....	3
BA 193	Business Law I.....	3	BA 194	Business Law II.....	3
BA 190	Business Statistics....	3	Mg	Elective.....	3
	Science.....	4		Science.....	4
Pl 111	Phil. Psychology.....	3	Pl 100	Metaphysics.....	3
So 125	Marriage.....	2			
Total.....		18	Total.....		16

Senior Year

First Semester		Sem. Hrs.	Second Semester		Sem. Hrs.
Mg	Electives.....	6	BA 196	Bus. Admin. Probs....	3
Ec 150	Money and Banking..	3	Mg	Elective.....	3
Pl 131	Prin. of Ethics.....	3	Ec 140	Econ. History, U. S... 3	3
Christian Culture (Ec 132 Recommended)....		3	Pl 132	Pers., Social Ethics... 3	3
Total.....		15	Total.....		15

THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Marketing)

The Bachelor of Science in Business Administration program with a concentration in marketing studies the institutions and functions of the modern distribution system. The program orients the student towards the total marketing concept so that, trained in the analytical processes, he is qualified for management responsibility in the marketing area. Furthermore, a student will find the study of marketing complementary to his choice of a career in the field.

Students working for the B.S.B.A. (Marketing) must complete these specified courses:

Course No.	Subject	Sem. Hrs.
Mk 70	Principles of Marketing	3
Mk 171	Marketing Policy	3
Mk 172	Marketing Research	3
Mk 174	Industrial Marketing	3
Mk 175	Marketing Management	3
Mk	Electives	6
Ac 51, 52	Principles of Accounting	6
Ec 33, 34	Principles of Economics	6
Ec 140	Economic History of U. S.	3
Mg 90	Principles of Management	3
IR 130	Labor Economics	3
Fi 150	Money and Banking	3
Fi 160	Business Finance	3
BA 190	Business Statistics	3
BA 193, 194	Business Law	6
BA 196	Business Administration Problems	3
Total		60

Prescribed subjects and credit hours required for the B.S.B.A. (Marketing) follow:

Subject		Sem. Hrs.	Subject		Sem. Hrs.
L.D.	U.D.		L.D.	U.D.	
Accounting	6	—	Marketing	3	18
Business Administration	—	12	Mathematics	6	—
Christian Culture	—	8	Military Science	6	—
Economics	6	3	Philosophy	3	15
English	12	—	Psychology	3	—
Finance	—	6	Science	8	—
History	6	—	Speech	2	—
Management and I.R.	3	3	Theology	8	—

B.S.B.A. (Marketing)

Freshman Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ac 51 Prin. of Accounting	3	Ac 52 Prin. of Accounting	3
Ec 33 Prin. of Economics	3	Ec 34 Prin. of Economics	3
Hs 7 Europe to 1500	3	Hs 8 Europe since 1500	3
Mt 21 Math. of Economics	3	Mt 22 Math. of Finance	3
En 3 English Comp.	3	En 4 English Comp.	3
Th 40 Christ in the Gospels	2	Th 41 Christ, Our Redeemer	2
MS 1 First Year Basic	1	MS 2 First Year Basic	1
Total	18	Total	18

Sophomore Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mg 90 Prin. of Management	3	Mk 70 Prin. of Marketing	3
Fi 160 Business Finance	3	Ec 130 Labor Economics	3
En 31 Studies in Lit.	3	En 32 Studies in Lit.	3
Ps 31 Gen. Psychology	3	Pl 34 Logic	3
Th 42 Christ in His Church	2	Th 43 Christ in the Soul	2
MS 31 Second Year Basic	2	MS 32 Second Year Basic	2
		CA 1 Prin. of Speech	2
Total	16	Total	18

Junior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Mk 171 Marketing Policy	3	Mk 172 Marketing Research	3
BA 193 Business Law I	3	BA 194 Business Law II	3
BA 190 Business Statistics	3	Mk 174 Indus. Marketing	3
Science	4	Science	4
Pl 111 Phil. Psychology	3	Pl 100 Metaphysics	3
So 125 Marriage	2		
Total	18	Total	16

Senior Year

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ec 150 Money and Banking	3	BA 196 Bus. Admin. Probs.	3
Mk 181 or 186	3	Mk 175 Marketing Mgt.	3
Mk Elective	3	Ec 140 Econ. History, U. S.	3
Pl 131 Prin. of Ethics	3	Pl 132 Pers., Social Ethics	3
Christian Culture (Ec 132 Recommended)	3	Pl 105, 106, 107, or 133	3
Total	15	Total	15

Departments of Instruction

The courses of instruction are numbered in accord with a unified plan. *Lower division* courses are numbered 1 to 99. Within the *lower division* the numbers 30 to 99 generally indicate that the course is open to sophomores. *Upper division* courses are numbered from 100 to 199. Graduate courses are numbered from 200 to 299. Double numbers indicate that the first semester course is prerequisite to the second semester course *and that both must be satisfactorily completed to obtain credit for either course*. Any exceptions will be stated in course descriptions. In most departments the courses are grouped in decades according to sequence, content, or some other plan of sub-division.



Key Symbols

The following key letters are used to indicate the different departments of instruction:

Accounting.....Ac	Industrial Relations.....IR
Biology.....Bl	Latin.....Lt
Business Administration...BA	Management.....Mg
Chemistry.....Ch	Marketing.....Mk
Christian Culture.....CC	Mathematics.....Mt
Communication Arts.....CA	Military Science.....MS
Economics.....Ec	Modern Language.....ML
Education.....Ed	Philosophy.....Pl
English.....En	Physics.....Ph
Finance.....Fi	Political Science.....Po
French.....Fr	Psychology.....Ps
Geography.....Gg	Russian.....Ru
German.....Gr	Sociology.....So
Greek.....Gk	Spanish.....Sp
History.....Hs	Theology.....Th

Departments—

The College of Arts and Sciences

Biology (Bl)

Staff: FR. PETERS, *chairman*; MR. CUSICK, DR. HIGGINS, DR. TAFURI.

Assisted by: DR. GILSDORF.

Laboratory Teaching Assistant: MR. MUNCH.

Bl 1 and 2 *cannot be taken for pre-medical or pre-dental requirements*.

Bl 3 and 4 are required as an introduction to all *upper division* courses. In exceptional cases, Bl 1 and 2 may be considered as partial requisite fulfillment.

A major consists of 8 credit hours of *lower division* work and 28 credit hours of *upper division* work inclusive of a senior thesis, Bl 199.

A minor consists of 8 credit hours of *lower division* work and 14 credit hours of *upper division* work.

UNDERGRADUATE DIVISION

Lower Division Courses

1. GENERAL BIOLOGY I. Four credit hours. A study of fundamental principles of biological science emphasizing the morphology and physiology of organs and systems in a typical vertebrate with special reference to the biology of man. Three lectures and two hours of laboratory.
2. GENERAL BIOLOGY II. A survey of the morphology, physiology, life history and economic importance of representative plants and invertebrate animals together with discussions of heredity, embryology and evolution. Three lectures and two hours of laboratory.
3. GENERAL ZOOLOGY I. Four credit hours. An introduction to the basic principles of biology with emphasis on the chordates and the anatomy and physiology of several representative vertebrates. Two lectures and four hours of laboratory.
4. GENERAL ZOOLOGY II. Four credit hours. A continuation of Bl 3 and a systematic survey of the morphology, physiology, classification, life history, development and interrelationship of the representative animals of the invertebrate phyla inclusive of heredity, evolution, ecology, conservation and related topics. Two lectures and four hours of laboratory.

9. **HUMAN ANATOMY AND PHYSIOLOGY.** Three credit hours. A study of the organs and systems of man with emphasis on myology and the physiology of exercise. This course is for students majoring in physical education. Two lectures and two hours of laboratory.

10. **HUMAN ANATOMY AND PHYSIOLOGY.** Three credit hours. A continuation of Bl 9. Two lectures and two hours of laboratory. Prerequisite: Bl 9.

Upper Division Courses

101. **COMPARATIVE ANATOMY OF THE VERTEBRATES.** Four credit hours. A study of the comparative morphology of the organs and systems of chordates. Two lectures and four hours of laboratory. Special materials fee: \$12. Prerequisite: Bl 3, 4.

105. **GENERAL BOTANY.** Four credit hours. A study of the morphology, physiology, classification and life cycles of representatives of the major divisions of the plant kingdom. Seed plants are stressed. Two lectures and four hours of laboratory.

106. **THE LOWER PLANT GROUPS.** Four credit hours. A study of the physiology and morphology of the algae, bacteria, and fungi. Isolation and culture methods and the beneficial and detrimental effects of these organisms will be included. Prerequisite: Bl 105.

112. **GENERAL AND VERTEBRATE EMBRYOLOGY.** Four credit hours. A study of the development of vertebrates, including gametogenesis, fertilization, and early embryology. Organogenesis of the chick and pig is emphasized in the laboratory. Two lectures and four hours of laboratory. Prerequisite: Bl 3, 4.

121. **THE BIOLOGICAL BASIS OF ANIMAL BEHAVIOR.** Four credit hours. A comparative study of the physiology and morphology of the nervous system and sensory receptors, with special emphasis on the adaptation of animal life to environmental changes. Two lectures and four hours of laboratory. Prerequisites: Bl 1 and 2, or Bl 3 and 4. (Ps 121)

141. **COMPARATIVE VERTEBRATE HISTOLOGY.** Four credit hours. A comparative study of the microscopic structure and function of organs and systems among vertebrates. Two lectures and four hours of laboratory.

142. **BIOLOGY OF CELLS AND MICROORGANISMS.** Four credit hours. A study of basic life processes of plants and animals, both

unicellular and multicellular, as revealed by the microscope. Two lectures, one quiz period and four hours of laboratory.

143. **GENERAL ENTOMOLOGY.** Four credit hours. Two lectures and four hours of laboratory.

152. **GENETICS.** Two or three credit hours. A study of the principles of heredity and the operation of hereditary factors in the development of individual traits. Two lectures and two hours of laboratory.

160. **BIOCHEMISTRY LECTURE.** Three credit hours. Biochemistry of carbohydrates, lipids and proteins discussed at length. Certain special topics inclusive of vitamins, hormones, enzymes and medicinal chemistry considered. Three lectures per week.

161. **GENERAL PHYSIOLOGY.** Four credit hours. A study of the fundamental behavior of living cells and tissues and an introduction to the physiology of mammalian systems. Two lectures and four hours of laboratory. Prerequisite: Bl 101.

180. **HISTORY OF BIOLOGY.** Two credit hours. A study of the historical development of the biological sciences. Two lectures; no laboratory.

188. **ECOLOGICAL PRINCIPLES.** Four credit hours. Two lectures and four hours of laboratory.

192a-h. **SPECIAL PROBLEMS IN BIOLOGY.** Two or four credit hours. This course is designed to give the student an opportunity to engage in the study of some specialized field of biology. The eight offerings are:

- a. Special Problems in Zoology
- b. Special Problems in Botany
- c. Special Problems in Physiology
- d. Special Problems in Anatomy
- e. Special Problems in Heredity
- f. Special Problems in Embryology
- g. Special Problems in Histology
- h. Special Problems in Entomology

A charge will be made for materials used in the laboratory.

Prerequisite: Permission of the Chairman of the Department, and Bl 3, 4, and 101.

194. **THEORY OF EVOLUTION.** Two credit hours. A study of organic evolution. Two lectures: no laboratory. Prerequisite: BI 1, 2 or 3, 4.
- 199a. **METHODS OF BIOLOGICAL RESEARCH.** One credit hour. Undergraduate research in one of the fields of biology selected by the student. Prerequisite: Senior standing, consent of the instructor directing the course, and approval of the Chairman of the Department. A charge will be made for materials used in the laboratory. The fee of \$25 is payable only once for BI 199a and BI 199b.
- 199b. **METHODS OF BIOLOGICAL RESEARCH.** One credit hour. A continuation and completion of BI 199a.

Chemistry (Ch)

Staff: DR. GARASCIA, *chairman*; DR. DUBE, DR. JOHNSON, DR. KLINGENBERG, DR. O'NEILL, FR. THEPE.

Assisted by: DR. DAMICO, MR. HAUSER, MR. RAPPAPORT, DR. WEBB.

Graduate Assistants: MR. BILESKY, MR. DAVIS, MR. FRIEDMAN, MR. HORGAN, MR. HURTUBISE, MR. KANCZUZEWSKI, MR. KESSLER, MR. MIESLE, MR. MILAM, MR. OLIVER, MR. SCHUMACHER, MR. WESTENDORF.

UNDERGRADUATE DIVISION

Lower Division Courses

1. **INTRODUCTION TO CHEMISTRY.** Four credit hours. A terminal course covering all branches of chemistry and stressing an understanding of chemistry as a science and its influence on the history of man. Three lectures and two hours of laboratory a week.
2. **INTRODUCTION TO CHEMISTRY.** Four credit hours. Lecture and laboratory. A continuation of Ch. 1.
3. **GENERAL CHEMISTRY.** Four or five credit hours. Lectures and demonstrations combined with discussion of problems and laboratory work. Three lectures and three to six hours of laboratory per week.
4. **GENERAL CHEMISTRY.** Four or five credit hours. A continuation of Ch 3. The laboratory work includes the equivalent of Ch 31. Three lectures and three to six hours of laboratory per week.

- 3-4. **GENERAL CHEMISTRY I.** Three credit hours. Evening Division only.
- GENERAL CHEMISTRY II.** Three credit hours. Evening Division only.
- GENERAL CHEMISTRY III.** Three credit hours. Evening Division only.
31. **QUALITATIVE ANALYSIS.** Three credit hours. Semi-micro techniques applied to qualitative identification of the common metal ions and acid radicals. Theory and practice. One lecture and six hours of laboratory work per week.
51. **QUANTITATIVE INORGANIC ANALYSIS.** Four credit hours. Theory and practice of analytical chemistry. Two lectures and six hours of laboratory per week.

Upper Division Courses

101. **ORGANIC CHEMISTRY.** Four credit hours. An introductory course treating the structure, preparation, reactions, and properties of carbon compounds. Three lectures and four hours of laboratory work per week. Prerequisites: Ch 3 and 4.
102. **ORGANIC CHEMISTRY.** Four credit hours. A continuation of Ch 101 which is also prerequisite.
106. **QUALITATIVE ORGANIC CHEMISTRY.** Three credit hours. A systematic identification of pure organic compounds and simple mixtures. Two lectures and six hours of laboratory work per week. Prerequisite: Ch 102.
107. **INTERMEDIATE ORGANIC CHEMISTRY.** Two credit hours. A detailed study of the important reactions of organic chemistry. Two lectures per week. Prerequisite: Ch 102.
116. **CHEMICAL MEASUREMENTS.** Four credit hours. Two lectures and six hours of laboratory per week. Modern analytical chemistry with emphasis on instrumentation and measurement techniques. Prerequisites: Ch 51, 102, and 126.
121. **ELEMENTARY PHYSICAL CHEMISTRY.** Three or four credit hours. A course intended primarily for pre-medical students who have not had Mt 50. Three lectures. One four-hour laboratory period per week if elected for four credit hours. Prerequisite: Ch 51.
125. **PHYSICAL CHEMISTRY.** Three credit hours. Three lectures per week. Prerequisites: Ch 102, Mt 52, Ph 9 and 10 (or Ph 3 and 4).

126. PHYSICAL CHEMISTRY. Four credit hours. A continuation of Ch 125, which is prerequisite. Three lectures and four hours of laboratory work.
151. INORGANIC PREPARATIONS. One lecture or individual consultation, and three hours of laboratory work per credit hour. Laboratory preparation of various classes of compounds intended to develop technique and to illustrate the methods employed in the preparation of pure inorganic compounds. Prerequisite: Ch 51.
152. ORGANIC PREPARATIONS. One, two or three credit hours. Lecture or consultation and laboratory work dealing with the fundamental techniques and manipulations of organic synthesis. Both theory and practice of operations such as distillation, melting point determination, recrystallization, etc., are reviewed. One lecture or individual consultation, and three hours of laboratory work per credit hour. Prerequisites: Ch 51, 101, 102.
160. BIOCHEMISTRY LECTURE. Three credit hours. Biochemistry of carbohydrates, lipids and proteins discussed at length. Certain special topics inclusive of vitamins, hormones, enzymes and medicinal chemistry considered. Three lectures per week. Prerequisite: Ch 102.
161. BIOCHEMISTRY LABORATORY. One or two credit hours. Experiments designed to illustrate biochemical principles. Three hours of laboratory per week per credit hour.
170. INTERMEDIATE INORGANIC CHEMISTRY. Three credit hours. A presentation of modern structural concepts of inorganic chemistry and their applications and limitations, correlations and interpretations. Prerequisite: Ch 4, 125.
171. INORGANIC CHEMISTRY LABORATORY. One credit hour. Laboratory techniques and practice in synthetic inorganic chemistry. One laboratory period per week. Prerequisite: Ch 170.
180. INTRODUCTION TO RADIOCHEMISTRY. Two credit hours. Lecture and laboratory. Basic principles of radiochemistry and methodology of instrumental techniques in the field.
190. CHEMICAL LITERATURE. One credit hour. An introduction to the use of chemical literature; discussion of minor chemical problems; required readings and reports. Prerequisite: junior standing.

192 a-d. PROBLEMS IN CHEMISTRY. Credit to be arranged. Conferences and direction in library and laboratory work. The four offerings are:

- a. Problems in Inorganic Chemistry
- b. Problems in Organic Chemistry
- c. Problems in Physical Chemistry
- d. Problems in Analytical Chemistry

A charge will be made for materials used in the laboratory. Prerequisite: permission of the Chairman of the Department.

199a. SENIOR THESIS. One credit hour. A course of directed reading and undergraduate research required of all majors in their senior year. A charge will be made for materials and apparatus used in this work.

199b. SENIOR THESIS. One credit hour. A continuation and conclusion of research begun in 199a. No additional charge for materials will be made.

GRADUATE DIVISION

The minimum requirements for a Master of Science degree in chemistry include:

1. Completion of 24 semester hours of course work inclusive of Ch 200, 207, 208, 215, 216, 225, 226, 253, and 254.
2. Master's thesis, Ch 299, constituting 6 semester hours of research.

Graduate Courses

200. CHEMISTRY SEMINAR. No credit. Critical discussion of and progress reports on theses and special topics by graduate students and staff members. Required for at least two semesters of all full-time students majoring in chemistry. Prerequisite: graduate standing.
201. ORGANIC CHEMISTRY FOR TEACHERS. Six credit hours. Four lecture and two laboratory credits. A course covering the preparation, properties, and reactions of the more common types of organic compounds. Laboratory work will include synthesis and identification of compounds.
202. THEORETICAL CHEMISTRY FOR TEACHERS. Six credit hours. Four lecture and two laboratory credits. A course intended to present the basic principles of physical and quantitative chemistry. Laboratory work will consist of experiments in both physical and analytical chemistry.

203. **INORGANIC CHEMISTRY FOR TEACHERS.** Four credit hours. Lectures only. This course will normally accompany Ch 204. Modern structural inorganic chemistry as well as descriptive chemistry based on the periodic relationships will be covered.
204. **CHEMICAL RESEARCH FOR TEACHERS.** Two credit hours. Laboratory work, library work, and written and oral report. After instruction in the use of chemical literature, the student selects a research topic upon which he will begin work during the same summer. Upon completion of the project, he submits a written report. An oral examination will be given over this material to satisfy the final examination requirement for the concentration in chemistry.
206. **ADVANCED QUALITATIVE ORGANIC ANALYSIS.** One or two credit hours. A review and extension of organic chemical reactions as applied to identification of organic compounds. Lecture and laboratory.
207. **ADVANCED ORGANIC CHEMISTRY.** Two credit hours. Lectures, library assignments, reports and conferences. Two lectures per week. Prerequisites: Ch 107 or equivalent.
208. **ADVANCED ORGANIC CHEMISTRY.** Two credit hours. A continuation of Ch 207.
210. **RADIOCHEMISTRY.** Two credit hours. An introduction to the principles of radiochemistry, properties of radioactive nuclides, and methodology of radiochemical applications.
211. **RADIOCHEMISTRY LABORATORY.** Two credit hours. Laboratory and instrumental technique in radiochemistry. Prerequisite: Ch 210.
212. **HETEROCYCLIC ORGANIC CHEMISTRY.** Two credit hours. A lecture course on the application of fundamental organic reactions as applied to the heterocyclic organic molecules. Two lectures per week. Prerequisite: Ch 102.
215. **ADVANCED ANALYTICAL CHEMISTRY.** Two credit hours. Comprehensive study of the theory and practice of analytical chemistry. Two lectures per week.
216. **ADVANCED ANALYTICAL CHEMISTRY.** Two credit hours. A continuation of Ch 215.
218. **QUANTITATIVE ORGANIC ANALYSIS.** Two credit hours. Analysis of organic compounds. Six hours of lecture-laboratory per week.

225. **ADVANCED PHYSICAL CHEMISTRY.** Two credit hours. The more important phases of theoretical and physical chemistry are rigidly developed from the viewpoint of thermodynamics. Prerequisites: Ch 125 and 126.
226. **ADVANCED PHYSICAL CHEMISTRY.** Two credit hours. A continuation of Ch 225.
230. **PHYSICO-CHEMICAL MEASUREMENTS.** One or two credit hours. A laboratory course in the application of physical measurements to the solution of typical research problems. Prerequisites: Ch 125 and 126. May be taken as laboratory to Ch 225 and 226.
235. **PHYSICAL ORGANIC CHEMISTRY.** Two credit hours. A study of mechanisms and rates of organic reactions. Two lectures per week.
240. **CHEMICAL KINETICS.** Two credit hours. Classical chemical kinetics of homogeneous systems. Prerequisite: Ch 126.
245. **THE CHEMICAL BOND.** Two credit hours. An introduction to the quantum theory of valence. Prerequisites: Ch 125, 126, and Mt 52.
248. **INTRODUCTION TO CHEMICAL SPECTROSCOPY.** Two credit hours. An introduction to the theory and practice of vibrational molecular spectroscopy. Prerequisites: Ch 126 and Mt 52.
252. **ADVANCED ORGANIC PREPARATIONS.** One to three credit hours. One lecture, individual consultation, and three hours of laboratory work per week per credit hour. A laboratory course.
253. **ADVANCED INORGANIC CHEMISTRY.** Two credit hours. A systematic presentation of modern developments in inorganic chemistry. Theoretical and descriptive. Two lectures per week.
254. **ADVANCED INORGANIC CHEMISTRY.** Two credit hours. A continuation of Ch 253. A lecture course.
260. **ADVANCED BIOCHEMISTRY.** Two credit hours. A review and extension of fundamental biochemistry. Two lectures per week supplemented by library assignments.
263. **MEDICINAL CHEMISTRY.** Two credit hours. The organic chemistry of medicinal products; structure-activity relationships will be stressed. Prerequisite: Ch 102 or its equivalent.
270. **INDUSTRIAL CHEMISTRY.** Two credit hours. A detailed treatment of important industrial processes. Assignments. Two lectures per week.

280. SPECIAL TOPICS. Two credit hours. Selections from the four major fields of chemistry. Varied topics representative of important phases of chemistry not treated in regular course work. The nature of the course material will be indicated by descriptive course titles, e.g., POLYMER CHEMISTRY or ORGANOMETALLICS, but the same course number will be retained.
281. SPECIAL STUDY. One credit hour. A short-term lecture series on special topics, emphasizing continuing education for practicing scientists. May be taken as a lecture series without credit. Nature of the course material will be indicated by descriptive subtitles.
299. MASTER'S THESIS. Six credit hours. Laboratory and library research under the supervision of a departmental research adviser. Problems may be selected from the general fields of organic, inorganic, analytical, or physical chemistry. A final written thesis is required for those desiring the Master's degree in chemistry. A charge will be made for materials and apparatus used in this work.

Classical Languages

Staff: DR. HARKINS, *chairman*; FR. BURKE, FR. COOK, FR. DUNNE, FR. FELTEN, FR. FESTLE, FR. HETHERINGTON, MR. HOWARD, FR. KENNEALY, DR. MURRAY, FR. PENDERGAST, FR. WUEST.

UNDERGRADUATE DIVISION

Greek (Gk)

Lower Division Courses

1. 2. ELEMENTARY GREEK. Six credit hours. One or two semesters.
- 5, 6. INTRODUCTION TO GREEK LITERATURE. Four or six credit hours. Two semesters.
7. XENOPHON. Three or four credit hours.
8. ST. LUKE. Two credit hours.
11. HOMER. Three credit hours. Readings from *The Iliad*.
12. HERODOTUS: SELECTED READINGS. Three credit hours.
17. LYSIAS: SELECTED READINGS. Three or four credit hours.

18. HOMER. Three credit hours. Selected portions of *The Odyssey*.
21. PLATO. Three or four credit hours. *The Apology* and other selections.
23. GREEK PROSE COMPOSITION, I. Two or four credit hours.
24. GREEK PROSE COMPOSITION, II. Two or four credit hours.

Upper Division Courses

Open to Advanced Undergraduates and to Graduates

100. HISTORY OF ANCIENT GREECE. Three credit hours.
103. DEMOSTHENES: THE CROWN. Three or four credit hours.
104. CHRISTIAN ANTIQUITY. Three credit hours. (Hs 104)
105. CLASSICAL MYTHOLOGY. Three credit hours. (Lt 105, En 105)
107. XENOPHON: THE ANABASIS. Three credit hours. Given at Milford College.
108. DEMOSTHENES: PHILIPPICS AND OLYNTHIACS. Three credit hours.
112. HERODOTUS. Three credit hours.
113. GREEK STYLE, I. Two credit hours.
117. LYSIAS. Three credit hours.
123. GREEK STYLE, II. Two credit hours.
141. THUCYDIDES: SICILIAN EXPEDITION. Three or four credit hours.
151. HOMER: ILIAD, I-XII. Three credit hours. A study of the Greek epic.
152. HOMER: ILIAD, XIII-XXIV. Three credit hours.
153. HOMER: ODYSSEY. Three credit hours.
160. SOPHOCLES. Three or four credit hours. *The Oedipus Tyrannus* and *Antigone*.
162. EURIPIDES. Three credit hours.
163. AESCHYLUS. Three credit hours.
164. ARISTOPHANES. Three credit hours.
171. PLATO: THE REPUBLIC. Three or four credit hours.

172. PLATO: DIALOGUES. Three credit hours.
185. CLASSICAL ARCHAEOLOGY. Two or three credit hours.
188. HISTORY OF CLASSICAL LITERATURE. Three credit hours.
195. GREEK LITERATURE IN TRANSLATION. Three credit hours.
197. SPECIAL STUDY. Three credit hours. Greek poetry.
198. SPECIAL STUDY. Three credit hours. Greek prose.
199. SENIOR COMPREHENSIVE REVIEW. Two credit hours. Required of all seniors majoring in Greek.

GRADUATE DIVISION

202. GREECE, THE FIFTH CENTURY. Three credit hours.
203. GREECE TO 480. Three credit hours.
204. GREEK PALAEOGRAPHY. Three credit hours.
215. GREEK AND ROMAN ART. Three credit hours.
216. TOPOGRAPHY OF ANCIENT ATHENS. Three credit hours.
241. THUCYDIDES. Three credit hours.
245. HERODOTUS. Three credit hours.
253. HOMER. Three credit hours.
- 261a. SOPHOCLES: EARLY PLAYS. Three credit hours.
- 261b. SOPHOCLES: LATER PLAYS. Three credit hours.
262. EURIPIDES. Three credit hours.
263. AESCHYLUS. Three credit hours.
264. ARISTOPHANES. Three credit hours.
271. PLATO: UTOPIA. Three credit hours.
272. PLATO: EARLY DIALOGUES. Three credit hours.
273. PLATO: MIDDLE DIALOGUES. Three credit hours.
274. PLATO: LATE DIALOGUES. Three credit hours.
275. ARISTOTLE: NICOMACHEAN ETHICS. Three credit hours.
276. ARISTOTLE: METAPHYSICS. Three credit hours.

289. LONGINUS. Three credit hours.
299. MASTER'S THESIS. Six credit hours.

Latin (Lt)

UNDERGRADUATE DIVISION

Lower Division Courses

1. ELEMENTARY LATIN. Eight credit hours. Five hours per week.
2. Two semesters.
13. LATIN COMPOSITION, I. Three credit hours.
14. LATIN COMPOSITION, II. Three credit hours.
15. INTERMEDIATE LATIN. Three credit hours. Prerequisite:
16. Latin 1 and 2 or their equivalent in high school. Review of grammar with special emphasis on reading; conversation and composition.
17. PHILOSOPHICAL LATIN. Three credit hours. An intensive review of basic syntax intended to prepare students for the reading of philosophical texts in Latin.
20. LATIN READINGS. Two credit hours. Graded readings selected
21. from the Latin Fathers, philosophical and theological authors, and the classics; designed for ready grasp of Latin idiom and vocabulary building.
22. HORACE: ODES. Three or four credit hours.
28. CICERO. Three or four credit hours. The *De Senectute* and/or the *De Amicitia*.
51. VIRGIL: AENEID, I-VI. Three credit hours.
53. VIRGIL: AENEID, VII-XII. Three or four credit hours.

Upper Division Courses

Open to Advanced Undergraduates and to Graduates

101. ROMAN ORATORY. Three credit hours.
105. CLASSICAL MYTHOLOGY. Three credit hours. (Gk 105, En 105)
106. HISTORY OF ANCIENT ROME. Three credit hours.
107. CONSTITUTIONAL HISTORY OF ROME. Three credit hours.
108. CAESAR. Three credit hours. A study of the entire Gallic War with a consideration of Roman military history.

109. PLINY: SELECTED LETTERS. Three credit hours.
110. TACITUS: AGRICOLA, GERMANIA. Three credit hours.
111. LIVY. Three credit hours.
112. TACITUS: THE ANNALS. Three credit hours.
113. ADVANCED LATIN COMPOSITION. Two, three or four credit hours.
114. ADVANCED LATIN COMPOSITION. Two credit hours.
118. ROMAN HISTORIANS. Three credit hours.
119. CICERO: LETTERS. Three credit hours.
120. CICERO: PRO ARCHIA, PRO LEGE MANILIANA, AND PRO MARCELLO. Three credit hours.
121. CICERO: PRO MILONE. Three credit hours.
122. INTRODUCTION TO A STUDY OF THE LATIN FATHERS. Three credit hours.
123. LATIN STYLE. Two, three, or four credit hours. Translations of standard English excerpts into Latin.
124. of standard English excerpts into Latin.
127. ROMAN METRICS. Three credit hours.
128. CICERO: ESSAYS. Two or three credit hours.
131. HORACE: ODES. Three credit hours.
135. EARLY CHRISTIAN POETS. Three credit hours.
138. MEDIAEVAL LATIN. Three credit hours.
141. HORACE: SATIRES, EPISTLES. Two or three credit hours.
142. JUVENAL. Three credit hours.
151. VIRGIL: AENEID. Three credit hours.
161. ROMAN COMEDY. Three credit hours.
171. CICERO: TUSCULAN DISPUTATIONS. Three credit hours.
172. CICERO: DE OFFICIIS. Three credit hours.
183. CLASSICAL ARCHAEOLOGY. Two or three credit hours.
188. HISTORY OF CLASSICAL LITERATURE. Three credit hours.

191. LUCRETIVS. Three credit hours.
- 198a. SPECIAL STUDY. Three credit hours.
- 198b. SPECIAL STUDY. Three credit hours.
199. SENIOR COMPREHENSIVE REVIEW. Two or three credit hours. Required of all seniors majoring in Latin.

GRADUATE DIVISION

201. LATIN PALAEOGRAPHY. Three credit hours.
205. ROMAN REPUBLIC. Three credit hours. (Hs 205)
209. EARLY ROMAN EMPIRE. Three credit hours.
212. THE ANNALS OF TACITUS. Three credit hours.
213. THE HISTORIES OF TACITUS. Three credit hours.
221. LETTERS OF CICERO. Three credit hours.
222. CONFESSIONS OF SAINT AUGUSTINE. Three credit hours.
223. STYLISTIC LATIN. Three credit hours.
224. SEMINAR IN PATRISTIC LITERATURE. Three credit hours.
227. ROMAN METRICS. Three credit hours.
232. CATULLUS. Three credit hours.
233. ROMAN ELEGY. Three credit hours.
238. MEDIAEVAL LATIN. Three credit hours.
241. HORACE. Three credit hours.
242. JUVENAL. Three credit hours.
245. SEMINAR IN ROMAN SATIRE. Three credit hours.
251. VIRGIL. Three credit hours.
262. ROMAN COMEDY. Three credit hours.
291. EPICUREANISM AT ROME. Three credit hours.
297. HISTORICAL DEVELOPMENT OF THE LATIN LANGUAGE. Three credit hours.
298. SPECIAL STUDY. Three credit hours.
299. MASTER'S THESIS. Six credit hours.

Communication Arts (CA)

Staff: Dean, Evening College, *acting chairman*; FR. FLYNN, MR. KVAPIL, MR. MAUPIN.

Assisted by: MR. GARTNER, DR. HAEFELE, DR. LINK, MR. MACK.

Lower Division Courses

1. PRINCIPLES OF SPEECH. Two credit hours. Training in good speech habits for conversation and for speeches for business and social occasions. Voice, diction, and gestures are emphasized in speaking assignments in the classroom.
2. PRINCIPLES OF SPEECH. Two credit hours. Given at Milford College.
3. ADVANCED EFFECTIVE SPEECH. One or two credit hours. Given at Milford College.
4. ADVANCED EFFECTIVE SPEECH. One or two credit hours. A continuation of CA 3. Given at Milford College.
5. BUSINESS AND PROFESSIONAL SPEAKING. Two credit hours. Given in the Evening College.
20. VOICE AND PHONETICS. Three credit hours. Vocal quality, articulation and phonetic symbols.
31. PRINCIPLES OF DEBATE. Two credit hours.
40. ORAL INTERPRETATION. Three credit hours. Dynamic oral reading by use of mind, voice, and body in interpreting the printed word.

Upper Division Courses

100. PUBLIC SPEAKING. Three credit hours. Preparation of formal addresses.
110. PRINCIPLES OF RADIO-TV. Two or three credit hours. Laboratory is included.
111. RADIO-TV SCRIPT WRITING. Two or three credit hours. The principles of the various forms of script writing for radio and television stations, including music continuity, commercial continuity, speech continuity, various adaptations, and original radio-TV drama.
112. RADIO-TV SCRIPT WRITING. Two or three credit hours. A continuation of CA 111.

113. TV PRODUCTION-DIRECTION. Two or three credit hours. A study and workshop in the principles of the planning, casting, rehearsing, and producing of various types of radio and television programs. Emphasis upon the specific duties and techniques of producing and directing programs.
114. RADIO-TV ANNOUNCING. Two or three credit hours. A study and training in studio procedures, interpretation and delivery of radio and television copy and script, including news, feature scripts, continuity, and commercials. Tape recordings, intercom and actual broadcasting, and telecasting experience are provided. Prerequisite: CA 1.
115. RADIO-TV ANNOUNCING. Two or three credit hours. A continuation of CA 114.
116. EDUCATIONAL TELEVISION. Two to four credit hours. (Ed 116)
117. AUDIO-VISUAL COMMUNICATION. Two to four credit hours. (Ed 117)
120. SURVEY OF MASS COMMUNICATIONS. Three credit hours. Survey of organization and functions of newspapers, magazines, radio, television, film, and other mass media for communicating information to the public.
130. SPEECH THERAPY. Two or three credit hours. (Ed 130)
131. CONFERENCE LEADERSHIP. Two or three credit hours. Discussion and conference methods employed in professional and business meetings.
141. ACTING TECHNIQUE. Three credit hours. Pantomime, improvisation and general movement. Workshop in scenes, character development and make-up.
142. DIRECTING. Three credit hours. Techniques and principles. Workshop productions directed by students.
143. STAGECRAFT. Three credit hours. Scenic design, building of scenery, lighting, etc.
144. PLAY PRODUCTION. Three credit hours. Play selection, casting, rehearsals, business management, etc.
146. PLAYWRITING. Three credit hours. General principles in the development of plot, characters and dialogue.
147. THEATER CLASSICS WORKSHOP. Four credit hours.

151. ADVANCED ACTING TECHNIQUES. Three credit hours.
152. ADVANCED DIRECTING. Three credit hours.
153. PLAY PRODUCTION WORKSHOP. Three or four credit hours.
(Ed 153)
170. PRINCIPLES OF JOURNALISM. Two or three credit hours.
171. NEWS WRITING. Two or three credit hours. Gathering the news and presenting it for publication. Lectures on the operations of a newspaper, the administration of the news staff, and news values. Discussion of the merit of various presentations of news stories. Practical exercises in writing news stories.
172. EDITORIAL WRITING. Two or three credit hours.
173. FEATURE WRITING. Two or three credit hours.
174. REPORTING IN DEPTH. Two or three credit hours.
180. PUBLIC OPINION AND PROPAGANDA. Two or three credit hours. Fundamental principles of publicity and a study of the techniques of propaganda, effects, purposes and counter-propaganda techniques. Public information media, what forces influence public opinion, and fundamentals of publicity, psychological warfare, promotional techniques, notoriety, press agency in radio, television, newspapers, magazines, and other media. Demonstrations, movies, TV programs, and other aids are used in this course, and an analysis of Russian and Soviet methods of propaganda is made.
181. PUBLICITY AND PUBLIC RELATIONS. Two or three credit hours. Development, role, and function of public relations. Methods for building public confidence. Stockholders, industry, employee, and community relations. Sales force, dealer, and customer relations. Methods of applying these relation techniques to the utility, financial, trade, and labor organizations. Large and small retailers, non-profit and religious groups, newspapers, radio and television operations, and manufacturing businesses.
191. CREATIVE THINKING. Two or three credit hours. This course covers lecture material on the current knowledge of creativity and on individual and group methods to develop and practice creative thinking. A proportion of class time will be used to practice these techniques. There will be opportunities for optional creative work and for reading in the field of creativity.

Economics (Ec)

Staff: FR. BESSE, *chairman*; DR. HAILSTONES, DR. LINK, MR. MASTRIANNA, DR. SCHULTZ.

Assisted by: DR. DONNELLY, MR. FATORA, DR. HARRIMAN, DR. HAYES, MR. MANLEY, MR. ROTHWELL, MR. WING, MR. ZIMMER.

UNDERGRADUATE DIVISION

Lower Division Courses

33. PRINCIPLES OF ECONOMICS. Three credit hours. This is the standard foundation course for all fields of study in Economics and Business Administration. The course covers the fundamental principles governing present day business and economic activity. Required for all *upper division* courses in economics.
34. PRINCIPLES OF ECONOMICS. Three credit hours. This course emphasizes the study and analysis of selected problems in the field of business economics. Required for all *upper division* courses in economics. Prerequisite: Ec 33.

Upper Division Courses

100. SURVEY OF ACCOUNTING. Three credit hours. An accounting course geared to acquaint the non-accountant with the functions that underlie the creation of financial statements; the proper presentation of all items on the statement; and their use as tools by management in planning present and future business activity. (Ac 100)
116. LABOR RELATIONS. Three credit hours. A study of issues and problems involved in union-management relations; an evaluation of collective bargaining as a method for resolving labor disputes in our economic system; case studies of labor disputes. (IR 116)
119. HISTORY OF THE LABOR MOVEMENT. Three credit hours. A study of workers' movements in the U. S.; comparison of characteristics of different organizations from the Colonial period to the present. (IR 119)
120. LABOR LEGISLATION. Three credit hours. A study of the origins and development of labor law in the U. S.; emphasis on laws treating injunctions, worker combinations, labor-management relations, internal union affairs, and working conditions. (IR 120)

122. **CURRENT LABOR PROBLEMS.** Three credit hours. A study of various normative and analytical frameworks for examining labor problems; application of these frameworks to several important problems facing the labor movement today. Prerequisite: IR 130. (IR 122)
125. **INTERNATIONAL LABOR PROBLEMS.** Three credit hours. A study of international labor bodies with which the American labor movement is affiliated. Comparative study of various labor movements and of the approaches of different labor movements to similar problems. Prerequisite: IR 130.
130. **LABOR ECONOMICS.** Three credit hours. A survey of organized labor and labor law; examination of wage determinants and wage theory; examination of causes and remedies of unemployment. (Mg 130)
132. **ECONOMIC THEORY AND SOCIAL ORDER.** Three credit hours. A study of economics from the viewpoint of Christian ethics. The Encyclicals as they affect the science of economics and business. A course intended to help the future business man plan and preserve a code of ethics founded on solid Christian principles. A Christian Culture course.
133. **MICROECONOMIC ANALYSIS.** Three credit hours. An advanced study of economic principles including an analysis of such fundamental concepts as value and price, rent, interest, wages and profits and their relation to the current problems of production, distribution, and exchange. Prerequisite: Ec 34.
134. **MACROECONOMIC ANALYSIS.** Three credit hours. This course concentrates on an analysis of the determinants of Gross National Product, employment levels, and rates of economic growth. The analysis is conducted within a framework of principles and relationships derived from the still developing body of modern macroeconomic theory. Prerequisite: Ec. 34.
135. **GOVERNMENT AND BUSINESS.** Three credit hours. A study of the structure of government in the United States with respect to government regulation of business. An analysis of the constitutional limitations: the due process of law regulations, the equal protection clause, privileges and immunities, and the extent of obligation of contract. (Po 135)
137. **ECONOMIC GEOGRAPHY.** Three credit hours. Study of world geography and the economic implications of natural resources. Emphasis on production of goods in relation to the development of agriculture, commerce, and industry in the

- United States and foreign countries. Prerequisites: Ec 33, 34. (Gg 137)
138. **CURRENT ECONOMIC PROBLEMS.** Three credit hours. Current problems in labor, monetary, and fiscal policy, debt management, social security legislation, public regulation of business and agriculture form a basis of discussion and analysis. Prerequisites: Ec 33, 34 and six hours upper-division credit in economics.
139. **HISTORY OF ECONOMIC THOUGHT.** Three credit hours. Study of world economic movements; analysis of literature in the field; theories of economics advanced by Aristotle, Saint Thomas Aquinas, Adam Smith, Ricardo, Mills, Malthus, George, Clark, Bentham, Jevons, Keynes and others.
140. **ECONOMIC HISTORY OF THE UNITED STATES.** Three credit hours. A study of the development of the American economy from the period of colonization to the present. Traces the progress of population, agriculture, industry, domestic and foreign commerce, banking and finance, and transportation. Integrates the economic, social and political development in the United States.
141. **COMPARATIVE ECONOMIC SYSTEMS.** Three credit hours. Origin and development of various economic systems; analysis of their operations and purposes; a comparison of the principal types—Socialism, Fascism, Communism—with Capitalism.
143. **ECONOMICS OF THE COMMUNIST STATE.** Three credit hours. The fundamental principles of Marxist Communism; their origins in the writings of Marx, Engels, Lenin, and Stalin; their relative importance; popular and orthodox communism; critical analysis of contemporary arguments against communism.
145. **INTERNATIONAL TRADE.** Three credit hours. This course covers the theory, policy, and practice of United States trade with the rest of the world. *Theory* is covered to gain a body of knowledge needed to understand the causal relationships that underlie international economic transactions. *Policy* is studied to discover the role of government in international trade as well as international agreements between private producers. *Practice* is studied to understand the conduct of international business.
148. **BUSINESS CYCLE ANALYSIS.** Three credit hours. History, description, measurement and pattern of business cycles; analysis of various theories and anticyclical measures; problems of economic stability.

50. **MONEY AND BANKING.** Three credit hours. Structure and operation of the present money and banking system; theory and history of money; credit and commercial banking; international financial relationships; Federal Reserve System. Prerequisites: Ec 33, 34. (Fi 150)
156. **PUBLIC FINANCE AND TAXATION.** Three credit hours. Analysis of the various forms of taxation; shifting and incidence of taxation; public borrowing; non-tax revenues; public expenditures; the effects of government revenue and expenditures on our economy. (Po 156)
159. **INTERNATIONAL MONETARY POLICY.** Three credit hours.
160. **BUSINESS FINANCE.** Three credit hours. The various types of American enterprises with special emphasis on the corporation—its organization, management, financing and budgeting.
184. **PRINCIPLES OF INTERNATIONAL TRADE.** Three credit hours. Importance to the economic life of the United States; markets for American products; foreign sales in comparison with domestic sales; financial problems of foreign trade; Import-Export Bank.
186. **SOCIO-POLITICS AND CAPITALISM.** Three credit hours.
190. **BUSINESS STATISTICS.** Three credit hours. A study of the manner of presentation of specific and general business reports for graphic determination of economic significance. A study of mathematical tools as used in business and industry including mode, mean, median and coefficient of correlation. (BA 190)
191. **ECONOMIC PROBLEMS OF LATIN AMERICA.** Three credit hours.
197. **TUTORIAL COURSE.** Two or three credit hours. Special reading and study for advanced students.

Other courses acceptable for a major or minor in economics are acceptable at the discretion of the department chairman.

Education (Ed)

Staff: DR. MCCOY, *chairman*; DR. ANDERSON, DR. CLARKE, FR. FESTLE, DR. HALE, DR. HANNA, MR. LAGRANGE, DR. LINK, DR. LOZIER, FR. MALONE, MR. P. MORSE, MR. SCHWEIKERT, MR. SCHUERER, DR. SOMMER.

Assisted by: MR. BOLSEN, FR. CONNELLY, MONS. FRANER, DR. GAROFALO, MR. J. P. GLENN, MR. H. MORSE, SR. MARGARET MICHELE MOTZ, MRS. ROTHSCHILD, MR. SETA, MR. WERNER, MR. YACKS, AND THE DEPARTMENT OF PSYCHOLOGY.

The courses in education, planned for the express purpose of providing the required standard preparation for teaching in secondary schools, are open to students majoring in any department.

Courses constituting the minimum professional requirements for high-school certification in Ohio are:

1. For the teaching of any subject—Ps 31, Ed 31, 41, 101, 102, 103 and a two-hour elective in education (except physical education).
2. For teaching physical education—Bl 9, 10, Ed 161, 162, 163, 164, 165, 166, 167, 168, and 169 in addition to above.

Students desirous of meeting professional requirements of other states, should obtain an official statement of specific requirements from the Department of Education of their respective states, and consult the Chairman of the Department before registering for courses in education.

UNDERGRADUATE DIVISION

Lower Division Courses

31. **PRINCIPLES OF EDUCATION.** Three credit hours. The role of the school in society.
41. **EDUCATIONAL PSYCHOLOGY.** Three credit hours. Psychological principles applied to learning and teaching. Prerequisite: Ps 31. (Ps 41)

Upper Division Courses

101. **SECONDARY METHODS.** Two credit hours. Methodology applicable to high school teaching in general. Methods best suited to each of the major content fields.
102. **SECONDARY CURRICULUM.** Two credit hours. Functions of secondary education; curricular experiences.
103. **STUDENT TEACHING.** Six credit hours. Laboratory experience in high school teaching under the supervision of a critic teacher for one semester.
110. **HISTORY OF EDUCATION.** Three credit hours. A brief survey of educational theory, institutions, and practice during ancient and modern times with special emphasis on contemporary education. Given at Milford College.
111. **SOCIAL CASE WORK.** Two or three credit hours. (So 111)
116. **EDUCATIONAL TELEVISION.** Two to four credit hours. (CA 116)
117. **AUDIO-VISUAL COMMUNICATION.** Two to four credit hours. (CA 117)
118. **INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ps 118)

119. GUIDING THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ps 119)
130. SPEECH THERAPY. Two or three credit hours. (CA 130)
131. PSYCHOLOGICAL AND ACHIEVEMENT TESTS. Three credit hours. A survey of commonly used group tests; testing procedures and rationale underlying these tests; tests of intelligence, aptitude, achievement, interest, and personality critically examined; procedures described for selecting and evaluating specific group tests in these areas. Two lectures and two laboratory periods per week. (Ps 131) (Mg 131)
134. CHILD PSYCHOLOGY. Two credit hours. The genetic study of growth and development; hereditary and environmental factors; early and later childhood to puberty. (Ps 134)
135. ADOLESCENT PSYCHOLOGY. Two credit hours. Interrelated physical, physiological, and mental changes associated with adolescence (Ps 135)
136. ABNORMAL PSYCHOLOGY. Two or three credit hours. Dynamics of a disturbed personality; symptoms, causes, and treatment of psychoneuroses, psychoses, and deviant personalities. Theoretical descriptions are illustrated through visual aids and field trips. (Ps 136)
138. STATISTICAL TECHNIQUES. Two or three credit hours. A study of basic statistics used in psychology and education, including sampling techniques, measures of central tendency, variability, and simple correlation. Two lectures and two laboratory periods per week. (Ps 138)
142. MENTAL HYGIENE. Two credit hours. A study of the progressive stages of development in emotional growth. Factors of adjustment and maladjustment in education, social relations, and occupations. (Ps 142)
150. MORAL PRINCIPLES IN GUIDANCE. Two or three credit hours. Principles of moral Theology as applied particularly in student guidance and counselling. (Th 150)
153. PLAY PRODUCTION WORKSHOP. Three or four credit hours. (CA 153)
155. DYNAMIC PSYCHOLOGY. Two credit hours. Critical appreciation of personality concepts and methodology of various psychotherapeutic schools. While special attention is given to Freud's contribution, other schools considered are Adlerian, Jungian, Rankian, Existential Therapy, and Client-Centered Therapy. (Ps 155)

156. PSYCHOLOGY OF DELINQUENCY. Two credit hours. A treatment of the types and causes of juvenile delinquency together with brief case histories. (Ps 156)
158. SOCIAL PSYCHOLOGY. Two credit hours. A study of the individual's personality, attitudes, and behavior in multi-individual situations. (Ps 158, So 158)
161. ADMINISTRATION OF PHYSICAL EDUCATION. Three credit hours. The principles, organization, and administration of the physical education program and the development of the intramural athletic program.
162. ADMINISTRATION OF HEALTH EDUCATION. Three credit hours. Methods and materials for teaching health. The selection of health material, organizational techniques, and the administration of the school health program.
- 163, 164. PHYSICAL EDUCATION METHODS AND MATERIALS. Four credit hours. The theory and practice of teaching physical education. Subject matter for use in teaching touch football, soccer and speedball, organized games, tumbling and apparatus, basketball, volleyball, conditioning, track and field, softball; physical education tactics and testing. Two semesters.
165. COACHING. Four credit hours. The theory of coaching football, basketball, baseball, track and field, golf, and tennis. Two semesters.
- 167, 168. HEALTH AND HYGIENE. Four credit hours. Ed 167 includes the American Red Cross Standard and the Advanced First Aid course, and the prevention and treatment of athletic injuries. Ed 168 includes personal and community hygiene for use in teaching that subject. Two semesters.
169. PRACTICUM: COMMUNITY RECREATION. Two credit hours.
170. DIFFERENTIAL PSYCHOLOGY. Two credit hours. The existence, extent, and significance of individual differences in human traits. The role of heredity and environment in producing individual differences. Psychological analysis of sex, racial, national, and other group differences. (Ps 170)
177. THEORIES OF PERSONALITY I. Two credit hours. Contributions of psychology to the study and understanding of human personality; meaning and application of different concepts in description of personality dynamics; an anthropological analysis of man; his basic emotions, their mutual

relationships, and their meaning; sources of personality formation; evaluation of current personality theories. (Ps 177)

178. THEORIES OF PERSONALITY II. Two credit hours. A continuation of Ed 177. (Ps 178)
180. INTRODUCTION TO PROJECTIVE TECHNIQUES. Two or three credit hours. Theory and rationale of projective techniques. Introduction to the Rorschach technique, Thematic Apperception Test, Szondi Test, visual-motor tests, drawing techniques, and word association tests. Tests are described, and clinical illustrations are presented with case histories. (Ps 180)
198. TUTORIAL COURSE. Credit to be arranged. Special reading and directed study for advanced students.

GRADUATE SCHOOL

The Department of Education of the Graduate School is organized to offer the in-service teacher or school administrator opportunities for advanced professional training through individual courses or through balanced programs leading to the Master of Education degree.

Required of all Candidates for M.Ed. Degree

201. PHILOSOPHY OF EDUCATION. Three credit hours. The historical development of educational philosophy and theories. Evaluation of major current philosophies.
203. EDUCATIONAL PSYCHOLOGY. Three credit hours. Major issues in the field of methods and educational psychology. The learning process. Factors influencing learning. The nature and extent of individual differences.
205. EDUCATIONAL ADMINISTRATION. Three credit hours. The role of the federal, state and local governments. School management including an overview of instructional personnel, business management, research, community relations and various responsibilities of the administrator.
207. EDUCATIONAL RESEARCH. Two and one credit hours. In this course two credit hours are devoted to major techniques and methods of educational research; comprehension of statistical terminology of research; and locating educational research on a given problem. The remaining credit hour is awarded

on completion of an actual research project. A separate grade is given for each phase of the course.

Open to Graduate Students and Advanced Undergraduates

111. SOCIAL CASE WORK. Two credit hours. (So 111)
116. EDUCATIONAL TELEVISION. Two to four credit hours. (CA 116)
117. AUDIO-VISUAL COMMUNICATION. Two to four credit hours. (CA 117)
118. INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ps 118)
119. GUIDING THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ps 119)
130. SPEECH THERAPY. Two credit hours. (CA 130)
131. PSYCHOLOGICAL AND ACHIEVEMENT TESTS. Two or three credit hours. (Ps 131)
134. CHILD PSYCHOLOGY. Two credit hours. (Ps 134)
135. ADOLESCENT PSYCHOLOGY. Two credit hours. (Ps 135)
136. ABNORMAL PSYCHOLOGY. Two or three credit hours. (Ps 136)
138. STATISTICAL TECHNIQUES. Two or three credit hours. (Ps 138)
142. MENTAL HYGIENE. Two credit hours. (Ps 142)
155. DYNAMIC PSYCHOLOGY. Two credit hours. (Ps 155)
156. PSYCHOLOGY OF DELINQUENCY. Two credit hours. (Ps 156)
158. SOCIAL PSYCHOLOGY. Two credit hours. (Ps 158, So 158)
170. DIFFERENTIAL PSYCHOLOGY. Two credit hours. (Ps 170)
177. THEORIES OF PERSONALITY I. Two credit hours. (Ps 177)
178. THEORIES OF PERSONALITY II. Two credit hours. (Ps 178)
180. INTRODUCTION TO PROJECTIVE TECHNIQUES. Two or three credit hours. (Ps 180)

Open to Graduate Students Only

204. DEVELOPMENTAL PSYCHOLOGY. Three credit hours. (Ps 204)
208. LEARNING AND MOTIVATION. Two or three credit hours. (Ps 208)
209. PSYCHOPATHOLOGY. Two credit hours. (Ps 209)

211. **ELEMENTARY CURRICULUM.** Two credit hours. Aims of elementary education. Specific objectives of primary and upper-elementary divisions. Classroom techniques for realizing these objectives.
212. **CURRENT PROBLEMS OF ELEMENTARY EDUCATION.** Two credit hours. A seminar.
213. **TEACHING THE BASIC SKILLS IN THE ELEMENTARY SCHOOL.** Two credit hours. A study of instructional techniques for the teaching of reading, writing, spelling and arithmetic.
214. **PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS.** Two credit hours.
220. **CLINICAL STUDIES: EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ps 220)
221. **SECONDARY CURRICULUM.** Two credit hours. Aims of secondary education. Specific objectives of curricular areas. Classroom techniques for realizing these objectives.
222. **CURRENT PROBLEMS OF SECONDARY EDUCATION.** Two credit hours. A seminar.
232. **EDUCATIONAL AND VOCATIONAL GUIDANCE.** Two credit hours. The school's responsibility for moral, social, and vocational guidance. Essentials of an adequate guidance program.
233. **COUNSELLING PRINCIPLES AND TECHNIQUES.** Two credit hours. Theory of counselling. Case method. Relationships to testing and to other sources of data. Interviewing. Place and value of records. Clinical procedures.
234. **ELEMENTARY SCHOOL GUIDANCE.** Two credit hours.
235. **OCCUPATIONAL INFORMATION AND JOB ANALYSIS.** Two credit hours. (Ps 235)
237. **INDIVIDUAL TESTS OF INTELLIGENCE.** Four credit hours. Underlying theory, administration, scoring, interpretation, and reporting of the individual tests of intelligence.
238. **CLINICAL EXPERIENCE.** Two to four credit hours. A laboratory course. Individual tests in clinical situation. Observation and interpretation of children tested under supervision. Prerequisite: Ed 237.
239. **LABORATORY IN GUIDANCE.** Two credit hours. Study of individual pupils: collecting pertinent data, interviewing,

- recording, diagnosis, inter-agency collaboration. Prerequisite: Ed 233.
241. **ELEMENTARY SCHOOL ADMINISTRATION.** Two credit hours. Criteria for an effective elementary school organization. Patterns of school organization. Administrative problems.
242. **SECONDARY SCHOOL ADMINISTRATION.** Two credit hours. Organization of secondary schools. Techniques of schedule-making. Administrative problems.
243. **SUPERVISION OF INSTRUCTION.** Two credit hours. Techniques of improving instruction through supervision.
244. **SEMINAR: SELECTED ADMINISTRATIVE PROBLEMS.** Two credit hours.
252. **MONTESSORI EDUCATION: PSYCHOLOGICAL BASES.** Three credit hours. (Ps 252)
253. **MONTESSORI EDUCATION: HISTORICAL, THEORETICAL, AND DEVELOPMENTAL ASPECTS.** Three credit hours. (Ps 253)
254. **MONTESSORI METHODS AND MATERIALS: SENSORY LEVEL.** Three credit hours.
255. **MONTESSORI METHODS AND MATERIALS: ABSTRACT LEVEL.** Three credit hours.
257. **MONTESSORI INTERNSHIP I.** Three credit hours.
258. **MONTESSORI INTERNSHIP II.** Three credit hours.
261. **EDUCATIONAL SOCIOLOGY.** Two credit hours. The Christian home; larger social units. The school in relation to other community social agencies.
263. **PAROCHIAL SCHOOL SOCIAL SERVICE.** Two credit hours. Special services that community agencies offer pupils. A required course for an elementary principal's certificate in the Archdiocese of Cincinnati. Open only to such candidates.
265. **PAROCHIAL SCHOOL ADMINISTRATION.** Two credit hours. Problems confronting the elementary school principal in schools of the Archdiocese of Cincinnati. Required course for an elementary principal's certificate in the Archdiocese of Cincinnati. Open only to such candidates.
270. **AUDIO-VISUAL AIDS TO EDUCATION.** Two credit hours. A study and examination of television, radio, the movie, recording machines and the phonograph as means of understanding and communication.

272. SCHOOL PUBLIC RELATIONS. Two credit hours. Relations of school and community. Effective use of media of public relations—press, radio, television.
274. ADMINISTRATION OF STAFF PERSONNEL. Two credit hours.
275. SCHOOL LAW. Two credit hours. Legal framework within which schools operate. Federal and state precedents. State code. Legal provisions for school finance.
276. SCHOOL FINANCE. Two credit hours.
277. SCHOOL BUILDINGS. Two credit hours.
278. DEVELOPMENTAL READING. Two credit hours.
- 278a-m. SPECIAL WORKSHOPS. Credit hours as offered.
279. IMPROVING READING. Two credit hours.
280. REMEDIAL READING. Two credit hours. The reading process. Reading disability and its psychological problems. Diagnosis of disability. Remedial instruction.
281. CLINIC IN REMEDIAL READING. Four credit hours. Lectures and laboratory experiences in remedial reading techniques. Diagnoses and instruction of selected children with reading disabilities. Special materials fee of \$5.00.
282. RESEARCH: HISTORY AND PHILOSOPHY OF EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 207.
283. RESEARCH: ADMINISTRATION. One or two credit hours. Individual research. Prerequisite: Ed 207.
284. RESEARCH: SECONDARY EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 207.
285. RESEARCH: ELEMENTARY EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 207.
286. RESEARCH: GUIDANCE. One or two credit hours. Individual research. Prerequisite: Ed 207.
287. RESEARCH: REMEDIAL READING. One or two credit hours. Individual research. Prerequisite: Ed 207.
288. RESEARCH: PSYCHOLOGY. One or two credit hours. Individual research. Prerequisite: Ed 207.

289. WORKSHOP: ————. One to six credit hours. Special workshops in different subjects to be designated as arranged.
290. ADMINISTRATION OF SCHOOL ATHLETICS. Three credit hours. Investigation and discussion of current problems and policies pertinent to administration of school athletics. Fall semester, 1962, and first summer session, 1963.
291. LEADERSHIP IN OUTDOOR RECREATION. Three credit hours. Consideration is given to the various types of camps, their administration, functions, and programs. Special emphasis is given to group and individual camping techniques.
292. ADMINISTRATION OF INTRAMURAL ATHLETICS. Three credit hours. Treatment of administrative problems, policies, and procedures involved in intramural athletics as applied to school systems.
293. FACILITIES FOR PHYSICAL EDUCATION, HEALTH, AND RECREATION. Three credit hours. A study of plan and facilities for physical education, health, and recreation program construction, use, maintenance, safety as related to the total school and community program.
294. SEMINAR: COACHING. Three credit hours. New techniques and developments in the coaching of football, basketball, baseball, and track presented by members of the Xavier coaching staff and guest coach-lecturers. (Open to men only.)
295. ADMINISTRATION OF COMMUNITY RECREATION. Three credit hours.
298. SPECIAL STUDY. Two or three credit hours.
299. MASTER'S THESIS. Six credit hours. For students desiring a program leading to the degree of Master of Arts.

English (En)

Staff: FR. SAVAGE, *acting chairman*; FR. CONNOLLY, MRS. DEW, DR. DOERING, MR. FELDHAUS, FR. FLYNN, MR. J. A. GLENN, MR. J. P. GLENN, FR. SHANLEY, FR. SULLIVAN, DR. WENTERSDORF, DR. WHEELER, DR. WILLER.

Assisted by: MR. FLAHIVE, MR. GUTTING, MR. HELMES, MR. LINDSEY, FR. CORMAN MULLEN, MR. NEWELL, DR. VORDENBERG, MR. WESSLING.

Graduate Assistants: MR. BRINSON, MR. MARX.

UNDERGRADUATE DIVISION

Lower Division Courses

3. ENGLISH COMPOSITION. Three credit hours. Principles of effective writing. Exposition, argumentation.
4. ENGLISH COMPOSITION. Three credit hours. Description, narration. Forms of prose.
13. RHETORIC AND LITERATURE. Three credit hours. Intensified instruction and practice in effective writing. Exposition and argumentation. Analysis of selected literary works. For designated freshmen and prospective English majors.
14. RHETORIC AND LITERATURE. Three credit hours. Description, narration. Forms of prose. Selected readings. For designated freshmen and prospective English majors.
31. STUDIES IN LITERATURE. Three credit hours. Study and critical evaluation of English and American poetry. Required for graduation except of Honors A.B. and Milford College students. Offered in first semester only.
32. STUDIES IN LITERATURE. Three credit hours. Nature of drama and the theater; evaluation of representative plays. Required for graduation except of Honors A.B. and Milford College students. Offered in second semester only.
42. ENGLISH LITERATURE TO 1750. Three credit hours. Given at Milford College.
43. ENGLISH LITERATURE SINCE 1750. Three credit hours. Given at Milford College.

Upper Division Courses

101. ADVANCED WRITING. Three credit hours. For students preparing to teach English in high school.
103. CREATIVE WRITING. Three credit hours.
105. CLASSICAL MYTHOLOGY. Three credit hours. By permission only. (Gk 105, Lt 105)
109. HISTORY OF THE ENGLISH LANGUAGE. Three credit hours. Introduction to linguistic development.
111. AESTHETICS AND LITERARY CRITICISM. Three credit hours. Philosophical basis of aesthetics; elements of taste; critical standards.
112. POETRY. Three credit hours. Similar to En 111 but limited to English and American poetry. Given at Milford College.
114. DEVELOPMENT OF ENGLISH PROSE. Three credit hours. Analysis from Lyly to the present. Given at Milford College.
116. ORATORY. Three credit hours. Theory and historical survey of oratory. Preparation and delivery of addresses. Given at Milford College.
121. MODERN DRAMA. Three credit hours. English and American drama.
122. ENGLISH DRAMA. Three credit hours. Given at Evening College.
123. AMERICAN DRAMA. Three credit hours.
125. THE SHORT STORY. Three credit hours. The American, English, and continental short story.
130. THE ENGLISH NOVEL TO 1890. Three credit hours.
137. WORLD LITERATURE. Three credit hours each semester. Masterpieces in classical and modern languages.
142. SURVEY OF ENGLISH LITERATURE TO 1750. Three credit hours.
143. SURVEY OF ENGLISH LITERATURE SINCE 1750. Three credit hours.
144. MEDIEVAL ENGLISH LITERATURE. Three credit hours. Non-linguistic survey exclusive of Chaucer.
145. CHAUCER: *The Canterbury Tales*. Three credit hours.
147. THE ENGLISH RENAISSANCE. Three credit hours. Tudor humanism, religious controversy, and the Elizabethan theater.

150. SHAKESPEARE. Three credit hours. Study of Shakespearian sources and age. Reading of approximately ten plays.
151. SHAKESPEARE: HISTORIES AND COMEDIES. Three credit hours.
152. SHAKESPEARE: TRAGEDIES AND TRAGI-COMEDIES. Three credit hours.
155. MILTON. Three credit hours.
157. SEVENTEENTH CENTURY LITERATURE. Three credit hours. Milton is not included.
160. EIGHTEENTH CENTURY LITERATURE. Three credit hours.
165. ROMANTIC LITERATURE. Three credit hours.
170. VICTORIAN POETRY. Three credit hours.
171. BRITISH PROSE OF THE NINETEENTH CENTURY. Three credit hours.
175. MODERN NOVEL. Three credit hours. Study of the contemporary American and British novel.
176. MODERN POETRY. Three credit hours. Study of significant trends and poets, American and British.
180. SURVEY OF AMERICAN LITERATURE. Three credit hours. From the colonial writers to the twentieth century.
183. THE AMERICAN NOVEL. Three credit hours.
185. SEMINAR IN AMERICAN ROMANTICISM. Three credit hours.
190. NEWMAN. Two or three credit hours. *The Idea of a University*.
194. SPECIAL STUDY. Credit by arrangement. Directed research.
199. SENIOR COMPREHENSIVE REVIEW. Two credit hours. Evening College only.

GRADUATE DIVISION

One-half of the work for the Master's degree must be completed in these courses open to graduate students only.

209. HISTORY OF THE ENGLISH LANGUAGE. Three credit hours.

220. ENGLISH COMEDY TO SHERIDAN. Three credit hours.
223. STUDIES IN AMERICAN DRAMA. Three credit hours.
230. THE NOVEL: DEVELOPMENT IN ENGLAND. Three credit hours.
244. ENGLISH LITERATURE, 700-1500. Three credit hours.
245. CHAUCER AND HIS MILIEU. Three credit hours. Chaucer as an interpreter of his times.
247. EARLY TUDOR LITERATURE. Three credit hours.
248. ELIZABETHAN LITERATURE. Three credit hours.
- 250a. STUDIES IN SHAKESPEARE: TRAGEDIES. Three credit hours.
- 250b. STUDIES IN SHAKESPEARE: HISTORY AND COMEDIES. Three credit hours.
255. STUDIES IN MILTON. Three credit hours.
257. STUDIES IN SEVENTEENTH CENTURY LITERATURE. Three credit hours.
260. STUDIES IN AUGUSTAN LITERATURE. Three credit hours.
265. STUDIES IN ROMANTIC LITERATURE. Three credit hours.
270. VICTORIAN POETS. Three credit hours.
271. VICTORIAN ESSAYISTS. Three credit hours.
275. STUDIES IN MODERN PROSE. Three credit hours.
276. STUDIES IN MODERN POETRY. Three credit hours.
280. AMERICAN LITERATURE. Three credit hours.
283. AMERICAN NOVEL, 1870-1925. Three credit hours.
284. AMERICAN POETRY. Three credit hours.
290. STUDIES IN NEWMAN. Three credit hours.
294. SPECIAL STUDY. Three credit hours. Intensive study of problems or particular areas of literature.
299. MASTER'S THESIS. Six credit hours.

Geography (Gg)

Staff: DR. LINK, MR. ROBERTS.

The Department of Geography is administered by the Dean of the College of Arts and Sciences. Courses are intended to augment the student's background in economics, science, and education.

Lower Division Courses

1. ELEMENTS OF GEOGRAPHY. Three credit hours.
2. WORLD GEOGRAPHY. Three credit hours. A study of space and distance relations on the earth; the distribution of natural features, resources, population; major commodities; transportation; world trade.

Upper Division Courses

120. GEOGRAPHY OF EUROPE. Three credit hours.
137. ECONOMIC GEOGRAPHY. Three credit hours. Study of world geography and the economic implications of natural resources. Emphasis on production of goods in relation to the development of agriculture, commerce, and industry in the United States and foreign countries. Prerequisites: Ec 33, 34. (Ec 137)
160. GEOGRAPHY OF LATIN AMERICA. Two or three credit hours.
175. POLITICAL GEOGRAPHY. Three credit hours. (Po 175)

History and Political Science

Staff: DR. SIMON, *chairman*; DR. GOODMAN, FR. JOHNSON, FR. KAPICA, FR. LINK, MR. MEISTER, FR. SHIELDS.

Assisted by: MR. GRIFFIN, MR. GUZMAN, MR. HENNIE, MR. KHALILI, MR. MOONEY, MR. MORRIS, MISS RENTSCHLER.

Graduate Fellows: MR. BERNINGER, MR. LAWRENCE, MR. LYNCH.

History (Hs)

UNDERGRADUATE DIVISION

Lower Division Courses

7. EUROPE TO 1500. Three credit hours. A broad survey of the growth of European society and culture.
8. EUROPE SINCE 1500. Three credit hours. A continuation of Hs 7.

Upper Division Courses

100. HISTORY OF ANCIENT GREECE. Three credit hours. The politics and society of old Greece. (Gk 100)
104. CHRISTIAN ANTIQUITY. Three credit hours. Early Christian society through the Patristic age.
106. HISTORY OF ANCIENT ROME. Three credit hours. The making of the foremost political creation of antiquity, its spread and its dissolution. Great Roman institutions and cultural monuments. (Lt 106)
107. CONSTITUTIONAL HISTORY OF ROME. Three credit hours. Development of the structure of law and justice. (Lt 107 and Po 107)
111. EARLY MIDDLE AGES, 300-1154. Three credit hours. Social and cultural change from the Age of Constantine to the Twelfth Century Renaissance.
112. THE HIGH MIDDLE AGES, 1154-1453. Three credit hours. Social organization. Political and artistic achievements. Education. Secularism and decline.
119. RENAISSANCE AND HUMANISM. Three credit hours. Climax of the Middle Ages in fine arts, economy, and expansion of town life. Shifting patterns in government. Critical spirit and return to classical norms. Changes in education.
121. RELIGIOUS UPHEAVAL IN THE 1500's. Three credit hours. Individualism supplanting social outlook. Factors that split Christianity and divided the Medieval Republic.
124. FRENCH REVOLUTION. Three credit hours. Causes of modern revolutionary spirit. Philosophies and bourgeois radicals. Constitutions and oppositions. Napoleon and Pitt.
125. NINETEENTH CENTURY EUROPE, 1800-1870. Three credit hours. A course designed to show the continuity of forces and ideas from Napoleon to the union of Nationalism and Imperialism.
126. EUROPE SINCE 1870. Three credit hours. Material progress and social ferment. Creation of new nationalistic societies. Political clashes, imperialistic involvements, social readjustments, *Realpolitik*, war.
131. ENGLAND TO 1603. Three credit hours. England from primitive times through Roman and medieval cultural development.

132. ENGLAND SINCE 1603. Three credit hours. Struggle for constitutional government. Overseas possessions. Industrial Revolution. Political domination of the world. Crises born of two wars.
140. HISTORY OF AMERICAN POLITICAL PARTIES. Three credit hours. Party formation and party rule in the United States. (Po 140)
141. UNITED STATES TO 1865. Three credit hours. Colonial base. Break from England. Confederation and Constitution. Federalists. Jeffersonian and Jacksonian democracy. The Tragic Era. Graduate credit not given.
142. UNITED STATES SINCE 1865. Three credit hours. Reconstruction. Continental expansion. Rise of cities. Social questions. International influence. Graduate credit not given.
143. FORMATIVE YEARS OF THE REPUBLIC. Three credit hours. Thirteen colonies become a national state. Immigration. Western movement. Industry and agriculture. Education and political maturity.
144. SECTIONALISM, 1825-1861. Three credit hours. Statesmen and constitutional discussion. Rising Northern industry. The West is heard from. An entrenched South. Disuniting factors. Clash of wealth and ideas. The final appeal.
145. CIVIL WAR AND RECONSTRUCTION, 1861-1885. Three credit hours. War. Healing wounds. Railroads and Western states. A "New South." Republican national hegemony. Higher education. Impacts of immigration and labor.
146. AGE OF BIG BUSINESS, 1885-1913. Three credit hours. Economic surge with its social and political sequel.
147. UNITED STATES IN THE TWENTIETH CENTURY. Three credit hours. Worldwide concern and influence of the nation.
148. CONSTITUTIONAL HISTORY OF THE UNITED STATES. Three credit hours. Elements active in colonial times. Making the Constitution. Amendments and interpretations. Changing attitudes, new conditions of life, fresh ideas.
149. CATHOLIC CHURCH IN THE UNITED STATES. Three credit hours. Origin, growth, and participation of the Church in American society, in education, and in institutions.
150. HISTORY OF OHIO. Three credit hours. Political and cultural patterns in the state. The part it played in national society.

151. COLONIAL HISPANIC AMERICA, 1492-1810. Three credit hours. A course in the organization of empire by Spain and Portugal. Cultural and economic institutions. Administration. The missions basic to the story. Trade problems. Vast expansion. Decision for independence.
152. HISPANIC AMERICA SINCE 1810. Three credit hours. Wars. Forming nations and governments. Religion vs. the State. Arts and letters. Foreign influence in economic affairs. Political thought. Making the OAS.
153. HISTORY OF MEXICO. Three credit hours. Archeology. Fusion of Spaniard and native spirit. Missions. Viceroyalty. Independence. Administrative quandries. Foreign relations. Losses to the United States. Juarez and Positivism. Diaz and dictatorship. Carranza, "Revolution," and peace.
156. HISTORY OF THE WEST, 1500-1783. Three credit hours. Study of the western movement as a mold of national character. English, French, and Spanish contributions. Peopling virgin land. Origins of American political ideas.
157. HISTORY OF THE WEST SINCE 1783. Three credit hours. A continuation of Hs 156, through the process of occupying the entire continental territory and emphasizing state-making; cultural changes; paternalism and hardy pioneers; repeated frontier experiences; the Far West; the making of America.
158. RISE OF THE AMERICAN CITY. Three credit hours. Emergence and importance of the city in socio-political America. (Po 158)
161. HISTORY OF SPAIN. Three credit hours. Spain is studied as the parent nation in forming America and as a vigorous protagonist in the European drama. Prehistory. Roman Spain. Visigothic and Moorish cultures. The Reconquest. Golden Age and empire. Recession and modern problems.
163. MODERN GERMANY SINCE 1815. Three credit hours. A study of the political, economic, social, and cultural forces which have shaped modern Germany, with special attention to the strong personalities who have guided Germany's destiny, and to Germany's role in world affairs.
165. TWENTIETH CENTURY EASTERN EUROPE. Three credit hours. Cultural and political developments following upon World War I and II.
166. HISTORY OF RUSSIA. Three credit hours. From Vladimir to Stalin. Early Byzantine contact. Mongol rule. Rise of the Romanovs. Westernization conflicting with oriental

tradition. Industrial Revolution. Science and culture. Red Revolution. Present position in the world.

171. INTER-AMERICAN RELATIONS TO 1903. Three credit hours. United States interests in and association with other American states, and their own inter-relations. The Monroe Doctrine. The Panama Question. (Po 171)
172. INTER-AMERICAN RELATIONS SINCE 1903. Three credit hours. The sequel of Hs 171. Political geography changes. Unity and disunity. Interventions. International conventions. "The Good Neighbor Policy." Regional unity. (Po 172)
173. UNITED STATES FOREIGN RELATIONS TO 1900. Three credit hours. America gropes toward world status in interest and influence. (Po 173)
174. UNITED STATES FOREIGN RELATIONS SINCE 1900. Three credit hours. Toward world power and worldwide responsibility. (Po 174)
177. INTERNATIONAL RELATIONS. Three credit hours. The theory of international relations. Elements of national power. Formulation and shaping of foreign policy. Diplomacy. International economics. Propaganda and ideology. Imperialism and colonialism. International organizations.
178. THE UNITED STATES AND SOUTHEAST ASIA. Three credit hours. (Po 178)
181. THE NEAR EAST. Three credit hours. (Po 181)
182. THE POLITICS, CULTURE, AND CIVILIZATION OF THE MIDDLE EAST. Three credit hours. (Po 182)
183. THE FAR EAST. Three credit hours. (Po 183)
185. HISTORY OF JAPAN. Three credit hours.
186. HISTORY OF CHINA. Three credit hours.
191. MEN AND IDEAS OF THE NINETEENTH CENTURY. Three credit hours. A survey of the vital economic, social, and political ideas developed by notable thinkers of Western Europe and the United States.
192. NATIONALISM IN MODERN TIMES. Three credit hours. An analysis of the principle of nationality and its relation to human nature and culture, biological heredity, and physical environment, followed by an exposition of the development of national consciousness and nationalist doctrines, and a survey of nationalist movements and their effects upon domestic and international politics.

194. HISTORICAL CRITICISM. Three credit hours. An undergraduate study of the canons of historical literature as found in its more notable productions. The problem of evidence. Truth in history. (Fall semester of senior class.)
198. ADVANCED READING AND RESEARCH. Three credit hours. Tutorial course for more gifted students under staff direction.
199. SENIOR COMPREHENSIVE REVIEW. Two credit hours. Taken either separately or with Hs 194 in preparation for the comprehensive examination and required of all seniors majoring in history.

GRADUATE DIVISION

201. HISTORICAL METHOD. Three credit hours. Ordinarily prerequisite to and required in all cases for graduate students in history. A course in approach to research adapted to the degree of Master of Arts in history and to seminar work for that degree.
202. GREECE, THE FIFTH CENTURY. Three credit hours. (Gk 202)
203. GREECE TO 480. Three credit hours. (Gk 201)
205. ROMAN REPUBLIC. Three credit hours. (Lt 205)
209. EARLY ROMAN EMPIRE. Three credit hours. (Lt 209)
225. SEMINAR: MODERN EUROPE, I. Three credit hours. Group studies in early modern Europe.
226. SEMINAR: MODERN EUROPE, II. Three credit hours. Group studies in later modern Europe.
243. "NEW ORDERS" OF THE TWENTIETH CENTURY. Three credit hours. A research course.
244. SEMINAR: JACKSONIAN ERA. Three credit hours.
246. SEMINAR: THE AGE OF BIG BUSINESS. Three credit hours.
247. SEMINAR: THE UNITED STATES IN THE TWENTIETH CENTURY. Three credit hours.
249. SEMINAR: CATHOLIC CHURCH IN THE UNITED STATES. Three credit hours.
251. SEMINAR: COLONIAL HISPANIC AMERICA. Three credit hours.
252. SEMINAR: REPUBLICAN HISPANIC AMERICA. Three credit hours.
256. SEMINAR: THE WEST TO 1783. Three credit hours. Based on the idea of Hs 156.

257. SEMINAR: THE WEST SINCE 1783. Three credit hours. Based on the idea of Hs 157.
258. SEMINAR: THE AMERICAN CITY. Three credit hours.
265. SEMINAR: TWENTIETH CENTURY EASTERN EUROPE. Three credit hours.
274. SEMINAR: UNITED STATES FOREIGN RELATIONS. Three credit hours. (Po 274)
299. MASTER'S THESIS. Six credit hours.

Political Science (Po)

UNDERGRADUATE DIVISION

Lower Division Courses

1. GOVERNMENT IN SOCIETY. Three credit hours.
2. AMERICAN GOVERNMENT. Three credit hours.

Upper Division Courses

102. PUBLIC ADMINISTRATION. Three credit hours.
107. CONSTITUTIONAL HISTORY OF ROME. Three credit hours. (Hs 107, Lt 107)
112. FOREIGN AFFAIRS IN THE UNITED STATES. Three credit hours. Organization and operation of the State Department. The foreign service. Congress and other agencies.
121. COMPARATIVE GOVERNMENT. Three credit hours. Representative types of modern governments.
131. ANCIENT AND MEDIEVAL POLITICAL PHILOSOPHY. Three credit hours. Early theories of government; growth of kingship, parliamentary ideas, English liberties; continental tendencies; canon law; secularism. Prerequisite: Junior standing.
132. MODERN POLITICAL PHILOSOPHY. Three credit hours. Rise of absolutism; modern democratic thought; international law; force doctrines; materialistic theories; Papal pronouncements. Prerequisite: Po 131.
135. GOVERNMENT AND BUSINESS, I. Three credit hours. A study of the structure of government in the United States with respect to government regulation of business. An analysis of the constitutional limitations: the due process of law regulation, the equal protection clause, privileges and immunities, and the extent of obligation of contract. (Ec 135)

136. GOVERNMENT AND BUSINESS, II. Three credit hours. A study of federal labor law, federal regulation of agriculture, government taxing and spending policies, and the power of eminent domain. An analysis of the administrative and enforcement problems encountered in carrying out the government's policies. An exposition of the influence of mercantilism, economic liberalism, Keynesian theory, and national socialism on government regulation of business. (Ec 136)
140. HISTORY OF AMERICAN POLITICAL PARTIES. Three credit hours. (Hs 140)
141. THE PRESIDENCY. Three credit hours. National Administration. Federal-State relationships. The constitutional concept of the office. The President as administrator, as commander-in-chief in wartime, as organ of foreign relations, and as political leader.
142. THE CONGRESS. Three credit hours. Congress, courts, structure, policies. The legislative process first in its constitutional concept and then in its political operation as related to the President and Congress.
148. CONSTITUTIONAL HISTORY OF THE UNITED STATES. Three credit hours. (Hs 148)
151. INTERNATIONAL LAW. Three credit hours. Origins and development. Territory and jurisdiction of States. Nationality. International claims. Diplomatic and consular officials. Treaties. Legal regulation of the use of force. International organizations.
156. PUBLIC FINANCE AND TAXATION. Three credit hours. (Ec 156)
158. RISE OF THE AMERICAN CITY. Three credit hours. Emergence and importance of the city in socio-political America. (Hs 158)
171. INTER-AMERICAN RELATIONS TO 1903. Three credit hours. (Hs 171)
172. INTER-AMERICAN RELATIONS SINCE 1903. Three credit hours. (Hs 172)
173. UNITED STATES FOREIGN RELATIONS TO 1900. Three credit hours. (Hs 173)
174. UNITED STATES FOREIGN RELATIONS SINCE 1900. Three credit hours. (Hs 174)
175. POLITICAL GEOGRAPHY. Three credit hours. The geographical basis of national life. Location. Raw materials. Population. Groupings of interest. Rejection of geopolitical determinism.

177. INTERNATIONAL RELATIONS. Three credit hours. (Hs 177)
178. THE UNITED STATES AND SOUTHEAST ASIA. Three credit hours. (Hs 178)
181. THE NEAR EAST. Three credit hours. (Hs 181)
182. THE POLITICS, CULTURE, AND CIVILIZATION OF THE MIDDLE EAST. Three credit hours. (Hs 182)
183. THE FAR EAST. Three credit hours. (Hs 183)
187. COMMUNISM: NATURE, OBJECTIVES, STRATEGY, TACTICS. Three credit hours.
195. REBUILDING THE SOCIAL ORDER. Two credit hours. (So 195)
198. ADVANCED READING AND RESEARCH. Credit arranged.
199. SENIOR COMPREHENSIVE REVIEW. Two credit hours. Required of all seniors majoring in political science.

Mathematics (Mt)

Staff: DR. LARKIN, *chairman*; MR. BRUGGEMAN, DR. CERIMELE, MR. CISELL, MR. DELANEY, MR. FLASPOHLER, FR. ISENECKER.

Assisted by: MR. COLLINS, MR. CUMMINGS, MRS. DAVIDOFF, MR. FEIGE, MR. KLEE, MR. RIBAR, MR. STRENK, MR. UHL, MR. WELTER.

Graduate Assistants: MR. HEJNY, MR. NIEHAUS, MR. TRUNNELL, MR. STRUNK.

UNDERGRADUATE DIVISION

Lower Division Courses

11. COLLEGE MATHEMATICS I. Three credit hours. Logic and sets, axioms for the integers, rational numbers and real numbers, equations and inequalities.
12. COLLEGE MATHEMATICS II. Three credit hours. Functions, exponential and logarithmic functions, trigonometric functions, introduction to analytic geometry and limiting processes.
21. MATHEMATICS OF ECONOMICS. Three credit hours. Graphing of functions. Linear, exponential, logarithmic, and quadratic functions. Systems of linear functions and functions of more than one variable.
22. MATHEMATICS OF FINANCE. Three credit hours. Compound interest and discount, annuities, amortization and sinking funds, depreciation, bonds, life insurance.

31. ALGEBRA AND TRIGONOMETRY. Three credit hours. The circular functions and applications, relation of circular functions to angles, inverse circular functions. Linear and quadratic functions, determinants, binomial theorem, mathematical induction.
50. CALCULUS AND GEOMETRY I. Three credit hours. The rate of change of function, derivatives of algebraic functions, applications, integration, applications in physics. Prerequisite: Mt 31.
51. CALCULUS AND GEOMETRY II. Three credit hours. Conic sections, polar coordinates, transcendental functions, hyperbolic functions, methods of integration, applications in physics. Prerequisite: Mt 50.
52. CALCULUS AND GEOMETRY III. Three credit hours. Vectors and parametric equations, solid geometry and vectors, partial differentiation, multiple integrals. Prerequisite: Mt 51.
97. TUTORIAL STUDY. Credit by arrangement.

Upper Division Courses

Mt 52 is a prerequisite to any upper division course in mathematics.

104. DIFFERENTIAL EQUATIONS. Three credit hours. Equations of the first and second orders, linear equations with constant coefficients, systems of ordinary equations.
106. ADVANCED CALCULUS. Three credit hours. Limits and continuity, vector treatment of: derivatives, functions of several variables, definite integrals, multiple and line integrals.
108. DIFFERENTIAL EQUATIONS AND INFINITE SERIES. Three credit hours. Equations of the first and second orders, systems of equations, infinite series and sequences, convergence, power series.
117. ECONOMETRICS. Three credit hours. Applications of economic theory, statistical methods, and the calculus to numerical economic data. Demand, cost, production, and other economic functions are analyzed in detail.
118. MATHEMATICS FOR ECONOMISTS. Three credit hours.
120. OPERATIONS RESEARCH I. Three credit hours.
121. OPERATIONS RESEARCH II. Three credit hours.

124. MATHEMATICAL STATISTICS I. Three credit hours. Probability, probability distributions (discrete, continuous, univariate, multivariate), characteristics of distributions, sampling. Prerequisite: Mt 52.
125. MATHEMATICAL STATISTICS II. Three credit hours. Estimation, hypothesis testing, confidence methods, regression analysis, factorial designs, experimental design, sampling inspection, non-parametric methods. Prerequisite: Mt 124.
128. NUMERICAL ANALYSIS I. Three credit hours. Differences, Central-Difference formulas, Lagrange's formula, numerical differentiation and integration, accuracy of formulas.
129. NUMERICAL ANALYSIS II. Three credit hours. The solution of numerical algebraic and transcendental equations, numerical solution of ordinary and partial differential equations.
130. THEORY OF NUMBERS. Three credit hours.
136. TOPICS IN CALCULUS AND GEOMETRY FOR TEACHERS. Six credit hours. The rate of change of a function, derivatives of algebraic functions, plane analytic geometry, integration, vectors, and parametric equations. Prerequisites: Mt 4, 5. Credit may be applied only toward M.Ed. degree.
137. TOPICS IN LOGIC AND MODERN ALGEBRA. Six credit hours. Credit may be applied only toward M.Ed. degree.
138. TOPICS IN GEOMETRY AND STATISTICS. Six credit hours. Credit may be applied only toward M.Ed. degree.
140. LINEAR PROGRAMMING. Three credit hours.
144. MATRICES AND VECTOR SPACES. Three credit hours. Algebra of matrices, determinants, inverses, groups of transformations, vector spaces, linear and bilinear mappings.
145. INTRODUCTION TO MODERN ALGEBRA. Three credit hours. Groups, isomorphism, homomorphism, rings, ideals, fields, linear congruences, real numbers. Prerequisite: Mt 144.
151. PARTIAL DIFFERENTIAL EQUATIONS. Three credit hours.
155. ADVANCED ORDINARY DIFFERENTIAL EQUATIONS. Three credit hours.
156. LIMITS AND SERIES. Three credit hours. Convergence of sequences and series of constants and functions, expansion of functions in power and Fourier series, introduction to summability.
157. ORTHOGONAL FUNCTIONS. Three credit hours.

158. INTERMEDIATE ANALYSIS. Three credit hours. Rigorous definitions of differentiation and integration, the calculus of several variables, Riemann-Stieltjes integration, measure of elementary sets.
159. INTRODUCTION TO COMPLEX VARIABLE. Three credit hours. Complex numbers, sequences and series of numbers and functions, analytic functions, Cauchy integral theorem, power series, residues.
160. ELLIPTIC AND HYPERBOLIC FUNCTIONS. Three credit hours.
162. PROJECTIVE GEOMETRY. Three credit hours.
165. MATHEMATICAL LOGIC. Three credit hours.
170. METHODS OF DIGITAL COMPUTATION I. Three credit hours.
171. METHODS OF DIGITAL COMPUTATION II. Three credit hours.
181. ELEMENTARY TOPOLOGY. Three credit hours. Point set topology of metric spaces, open and closed sets, continuity, compactness, limits. Prerequisite: Mt 145.
197. SPECIAL READING AND STUDY FOR ADVANCED STUDENTS. Credit by arrangement.

GRADUATE DIVISION

Mt 200, 201, 202, 203, 204 are offered only in the summer. The other courses are offered in a two-year cycle in the evenings during the school year.

200. TOPOLOGY. Three credit hours.
201. REAL ANALYSIS. Three credit hours.
202. THEORY OF INTEGRATION. Three credit hours.
203. COMPLEX ANALYSIS. Three credit hours.
204. MODERN ALGEBRA. Three credit hours.
244. MODERN ALGEBRA I. Three credit hours. Set theory, the system of natural numbers, semigroups and groups, rings, integral domains and fields, extensions of rings and fields.
245. MODERN ALGEBRA II. Three credit hours. Elementary factorization theory, groups with operators, Jordan-Holder Theorem, modules and ideals, lattices.
250. FUNCTIONS OF A REAL VARIABLE I. Three credit hours. Real number system, elements of set theory, numerical sequences and series, continuity, differentiation.

251. FUNCTIONS OF A REAL VARIABLE II. Three credit hours.
Sequences and series of functions, functions of several variables, Riemann-Stieltjes integral, the Lebesgue theory.
252. FUNCTIONS OF A COMPLEX VARIABLE I. Three credit hours.
Number systems, complex plane, Mobius transformations, powers and roots, holomorphic functions, infinite series.
253. FUNCTIONS OF A COMPLEX VARIABLE II. Three credit hours.
Elementary functions, complex integration, analytic continuation, Laurent expansion, meromorphic functions, calculus of residues.
255. MEASURE THEORY AND INTEGRATION. Three credit hours.
Linear spaces, additive classes and Borel sets, outer measures, Lebesgue-Stieltjes Measure, measurable functions, integration, convergence theorems, differentiation.
280. GENERAL TOPOLOGY I. Three credit hours.
281. GENERAL TOPOLOGY II. Three credit hours.
297. SPECIAL READING FOR ADVANCED GRADUATE STUDENTS. Credit by arrangement.
299. MASTER'S THESIS. Six credit hours. Required of all students following Plan A.

Military Science (MS)

The Reserve Officers' Training Corps

Staff: COL. DOOLEY, *chairman*; LT. COL. MAJ. MAJ. GRIFFITH, MAJ. LUNDY, CAPT. INGRAM, CAPT. KUSHNER, CAPT. MITCHELL, CAPT. STANBOROUGH.

Assisted by: M/SGT. BLANKENSHIP, M/SGT. FOREST, S/SGT. KRATZER, S.F.C. COLLARD, S.F.C. KORMANIK, S.F.C. PARKS, S.F.C. ROSS, S.S.G. THOMAS, SPECIALIST ALEXANDER.

A senior unit of the Reserve Officers' Training Corps is maintained at the University by the Department of the Army.

The Department of Military Science provides an opportunity for the study of subjects of recognized military and educational value to assist the student in laying the foundations of intelligent citizenship. The primary mission is to produce junior officers who have qualities and attributes essential to their progressive and continued development as officers in the Army of the United States (United States Army Reserve), and the Regular Army.

Every student who is a physically fit citizen of the United States, between the ages of fourteen and twenty-four, is obliged to take

military science during the first two years of attendance. One year of military science is required of the transfer student entering as a sophomore; none, of one entering as a junior or senior. Students entering the University at mid-year must wait until the beginning of the next academic year to begin their instruction in military science.

Effective with school year 1965, the Army will provide scholarships to selected students. These scholarships provide payment of tuition fees, book costs, laboratory expenses, and \$50.00 retainer pay per month. The maximum term of scholarships is ten months per year for four years or 40 months.

All advanced course students attending the required six weeks summer training will be paid travel allowance to and from the training installation at the rate of six cents per mile. Pay during the training period will be \$120.60 per month.

All cadets not on scholarships but participating in the advanced program will receive retainer pay of \$40.00 per month for the period of enrollment.

All newly commissioned officers going on active duty will receive \$300.00 uniform allowance.

Individuals who are granted scholarships must enlist in the Enlisted Reserve Unit at Xavier and sign a formal contract agreeing to accept a commission if offered and to serve on active duty for four years.

Individuals completing the voluntary advanced program must complete the same agreements as scholarship students, except the active duty agreement is for only *two years*.

Application for exemption from military science may be made by a student who has had active service with the armed forces of the United States and who has been honorably discharged therefrom, or for reasons of physical disability. Six months to one full year of military service, including the completion of basic training, will be accepted as meeting the requirements in military science at the freshman level; over one year of military service meets military science requirements at the freshman and sophomore levels. All claims of exemption accompanied by the evidence thereof must be filed in the office of the PMS and reviewed by the dean.

The complete program of instruction comprises four sessions of *lower division* or basic courses and four sessions of *upper division* or advanced courses.

The basic courses are designed to give the student basic military and citizenship training which will benefit him and the military service if he goes into the army.

The advanced courses qualify a limited number of selected students for commissions in the United States Army Reserve and

the Regular Army. Admission to MS 101 will depend upon the fulfillment of the following conditions:

1. The filing of a formal request with the Chairman of the Military Department within the dates annually announced.
2. The completion of MS 1, 2, 31 and 32. Equivalence of basic courses completed in service (for veterans) or in some other Reserve Officers' Training Corps unit will be determined by the Chairman of the Military Department, who should be informed of the training completed, preferably in writing, thirty days prior to registration.
3. The demonstration of exceptional qualities of leadership and scholarship.
4. An agreement to complete the course and to perform six summer weeks of practical work at camp after the completion of MS 101 and 102. This work must be done under designated military supervision at a Regular Army installation.
5. Successful passing of the prescribed physical examination.
6. Attainment of a prescribed minimum score on a Department of the Army special aptitude test administered by the Department of Military Science at the University.

Credit for ROTC will be given on the same basis as for other courses offered in the University. Where non-directed electives are required, advanced ROTC may be used to meet these requirements.

Further information regarding the course will be found in the ROTC Cadet *Handbook* issued by the department.

Lower Division Courses

1. FIRST YEAR BASIC COURSE. Two credit hours. An introduction to military science which includes organization of the Army and ROTC; instruction and practice in marksmanship; study of the role of the US Army in national security; and basic training in the school of the soldier and the exercise of command. Additional course credit is granted in academic fields as agreed between the PMS and the Dean. Two semesters.
31. SECOND YEAR BASIC COURSE. Four credit hours. Further instruction in the basic duties of a soldier includes instruction in American military history; instruction and application of map and aerial photograph reading; introduction to Field Artillery tactics and techniques to include its mission, organization, and capabilities, materiel, communications, section drill, and a survey of the organization and tactical employment of missiles; and continuation of training in the school of the soldier and the exercise of command. Two semesters.

Upper Division Courses

101. FIRST YEAR ADVANCED COURSE. Two credit hours. The theory and application of military leadership; military teaching methods to include practical application of techniques; development of leadership potential through drill and the exercise of command. Additional course credit is granted for study in academic fields as agreed between the PMS and the Dean.
102. FIRST YEAR ADVANCED COURSE. Three credit hours. Introduction to Infantry tactics; small unit tactics and communications; squad combat formations with practical exercises. Instruction in counterinsurgency, and map reading. Instruction and practice in leadership laboratory continue. Attendance at a six-week summer camp at a Regular Army establishment is normally scheduled following the First Year of Advanced ROTC training. This summer camp will normally be conducted at Indiantown Gap Military Reservation, Annville, Pennsylvania (approximately 20 miles NE of Harrisburg, Pennsylvania).
103. SECOND YEAR ADVANCED COURSE. Three credit hours. Field Artillery tactics and techniques to include: artillery survey; duties of firing battery personnel; procedures in adjusting artillery fires both as a forward observer and in the fire direction center; operation of a Field Artillery Battery and the tactical employment of artillery. Instruction and research in the role of the United States in world affairs. Leadership training through drill is continued with all students performing officer's duties at drill. Scholarships valued at \$600 for pilot training are granted to qualifying seniors in the ROTC program who volunteer and are selected by the Chairman of the Military Department for the flight training offered by the Army ROTC at a Federal Aviation Administration (FAA) approved flying school.
104. SECOND YEAR ADVANCED COURSE. Two credit hours. Continuation of instruction necessary to success as a junior officer in: military law to include Courts-Martial, pre-trial investigations, and the Articles of the Uniform Code of Military Justice; orientation on the military service to include social and official customs, retirement benefits, pay scales, and a review of the military obligations incurred by ROTC graduates. Leadership laboratory is concluded with the students' serving in positions of the more senior officers. Additional course credit is granted for study in academic fields as agreed between the PMS and the Dean.

Modern Languages

Staff: DR. BOURGEOIS, *chairman*; MR. EBACHER, MR. RIESELMAN, MR. SCHURR, DR. VEGA.

Assisted by: MR. EICK, MR. HILVERS, MR. LEONARD, MR. PLAGEMAN, MR. STADELMAN, S.J.

Students who present two or more high school units of a modern language and who pass a qualifying examination may complete Intermediate French, German, or Spanish in fulfillment of their modern language requirement.

Normally, the successful completion of the second semester of the intermediate course is a prerequisite for enrollment in upper division courses.

Oral-aural exercises closely related to the material covered in elementary and intermediate language classes are available on a regular schedule in the Geoghegan Memorial Language Laboratory. All students in elementary classes are required to attend three 20 minute sessions per week; all intermediate language students except those in Scientific German must attend two such sessions per week.

UNDERGRADUATE DIVISION

French (Fr)

Lower Division Courses

1. ELEMENTARY FRENCH. Three credit hours. Designed to develop facility in reading, writing and speaking simple French.
2. ELEMENTARY FRENCH. Three credit hours. A continuation of Fr 1.
31. INTERMEDIATE FRENCH. Three credit hours. Review of grammar with special emphasis on reading; conversation. Prerequisite: Fr 2 or the equivalent.
32. INTERMEDIATE FRENCH. Three credit hours. A continuation of Fr 31.

Upper Division Courses

101. ADVANCED ORAL AND WRITTEN COMPOSITION. Three credit hours. Required of all majors and minors.
121. MODERN FRENCH PROSE. Three credit hours. The study of novels by modern prose writers: Chateaubriand, Balzac, Flaubert, Barres, Mauriac, Duhamel and others.
124. THE SHORT STORY. Three credit hours. The reading and study of representative short story writers.

141. POETRY OF THE NINETEENTH CENTURY. Three credit hours. Readings from Victor Hugo, Lamartine, Vigny, Musset and others.
150. EIGHTEENTH CENTURY LITERATURE. Three credit hours. Reading and discussion of representative writers of the Eighteenth Century.
151. FRENCH CLASSIC DRAMA. Three credit hours. A reading of dramas chosen from Corneille, Moliere, and Racine.
155. RABELAIS AND MONTAIGNE. Three credit hours. Life and works with analytical study of *Gargantua et Pantagruel* and *Les Essais*.
161. FRENCH LITERATURE TO LOUIS XIV. Three credit hours.
162. FRENCH LITERATURE SINCE LOUIS XIV. Three credit hours.
164. FRENCH POETRY SINCE BAUDELAIRE. Three credit hours. A study of Baudelaire, his poetry and influence, and of subsequent schools in contemporary French poetry.
166. LA RENAISSANCE EN FRANCE. Three credit hours. A study of the main artistic and cultural manifestations of this period in France.
170. LES PENSEURS DU XVII^e SIÈCLE. Three credit hours. A survey of philosophical, theological and aesthetic ideas with emphasis on Descartes, Pascal and Boileau.
181. CONTEMPORARY CATHOLIC WRITERS. Three credit hours. The Catholic spirit in French literature, and the Catholic literary revival in France.
194. SELECTED READINGS. Credit to be arranged. Directed reading and study for summer and special students. Course offered by arrangement with Chairman of the Department.
195. INTRODUCTION TO FRENCH CULTURE. Three credit hours. Through lectures and discussions in French, this course touches upon all phases of French social and political life in the past and in the present.

German (Gr)

UNDERGRADUATE DIVISION

Lower Division Courses

1. ELEMENTARY GERMAN. Three credit hours. Designed to develop facility in reading, writing and speaking simple German.
2. ELEMENTARY GERMAN. Three credit hours. A continuation of Gr 1.

31. INTERMEDIATE GERMAN. Three credit hours. Review of grammar with special emphasis on reading; conversation. Prerequisite: Gr 2 or the equivalent.
32. INTERMEDIATE GERMAN. Three credit hours. A continuation of Gr 31.
33. SCIENTIFIC GERMAN. Three credit hours. Readings in the physical and biological sciences, but primarily in chemistry. This course is intended to prepare students for the use of German source materials in scientific work. Individual consultation and reports arranged as needed. Prerequisite: Gr 2 or the equivalent.
34. SCIENTIFIC GERMAN. Three credit hours. A continuation of Gr 33.

Upper Division Courses

101. ADVANCED ORAL AND WRITTEN COMPOSITION. Three credit hours. Required of all majors and minors.
110. MEDIEVAL GERMAN LITERATURE. Three credit hours. Lectures and readings in the representative works from 1100 to 1500 inclusive of Walther von der Vogelweide, Hartmann von Aue and Wolfram von Eschenbach.
132. READINGS IN GERMAN LITERATURE I. Three credit hours. The development, forms and characteristics of German literature from the beginnings to the end of the classical period. Selected readings.
133. READINGS IN GERMAN LITERATURE II. Three credit hours. The development, forms and characteristics of German literature from the end of the classical period to the present time. Selected readings. A continuation of Gr 132.
160. SCHILLER. Three credit hours. A study of the life and works of Schiller through lectures and selected readings.
161. GOETHE. Three credit hours. Lectures and readings in Goethe's works together with a study of his life and times.
162. GOETHE'S FAUST. Three credit hours. A critical study of Part I; assigned readings, reports and lectures on Part II.
165. NINETEENTH CENTURY GERMAN LITERATURE. Three credit hours. Lectures and readings in the development of German literature from the beginning of romanticism through the rise of naturalism.
166. NINETEENTH CENTURY GERMAN LITERATURE. Three credit hours. A continuation of Gr 165.

170. THE MODERN SHORT STORY. Three credit hours. A study of the literary development of the period since 1880 and readings from representative authors including Arthur Schnitzler, Rainer, Maria Rilke, Paul Ernst, Thomas Mann and others.
171. THE MODERN DRAMA. Three credit hours. A study of the principal trends in the drama since 1880 and readings from Hauptmann, Hoffmannsthal and others.
172. MODERN POETRY. Three credit hours. A study of representative German poets from Rilke to the present time.
180. MODERN LITERATURE. Three credit hours. A study of the principal trends in German literature since 1880. Readings from Hauptmann, Nietzsche, Schnitzler, Mann, Kafka, and others.
181. MODERN LITERATURE. Three credit hours. A continuation of Gr 180.
194. SELECTED READINGS. Credit to be arranged. Directed reading and study for summer and special students. Course offered by arrangement with Chairman of the Department.

Russian (Ru)

UNDERGRADUATE DIVISION

Lower Division Courses

1. ELEMENTARY RUSSIAN. Three credit hours. Designed to develop facility in reading, writing and speaking simple Russian.
2. ELEMENTARY RUSSIAN. Three credit hours. A continuation of Ru 1.
31. INTERMEDIATE RUSSIAN. Three credit hours. Review of grammar with special emphasis on reading and conversation. Prerequisite: Ru 2 or the equivalent.
32. INTERMEDIATE RUSSIAN. Three credit hours. A continuation of Ru 31.

Spanish (Sp)

UNDERGRADUATE DIVISION

Lower Division Courses

1. ELEMENTARY SPANISH. Three credit hours. Designed to develop facility in reading, writing and speaking simple Spanish.
2. ELEMENTARY SPANISH. Three credit hours. A continuation of Sp 1.

31. INTERMEDIATE SPANISH. Three credit hours. Review of grammar with special emphasis on reading; conversation. Prerequisite: Sp 2 or the equivalent.
32. INTERMEDIATE SPANISH. Three credit hours. A continuation of Sp 31.

Upper Division Courses

101. ADVANCED ORAL AND WRITTEN COMPOSITION. Three credit hours. Required of all majors and minors.
110. EPIC POETRY. Three credit hours. *Cantar del Mio Cid*, basic work of this *genre*, will be analyzed in the classroom. Other readings from the epic literature of Spain and France.
121. SPANISH NOVEL OF THE RENAISSANCE. Three credit hours. A study of the works of the leading novelists of the fifteenth and sixteenth centuries.
140. SPANISH-AMERICAN LITERATURE. Three credit hours. The colonial period from the sixteenth through the eighteenth centuries.
150. NOVELA DEL SIGLO DE ORO. Three credit hours. The development of the novel during Spain's literary Golden Century closing with Cervantes' *Don Quijote*. Lectures, readings and discussions in Spanish. Collateral readings.
151. SPANISH MYSTICS. Three credit hours. A study of the prose and poetry of this period with emphasis upon the works of Santa Teresa de Jesus, Fray Luis de Leon, and Juan de la Cruz.
152. CERVANTES. Three credit hours. Life and works with analytical study of *Don Quijote*. Lectures and readings.
155. TEATRO DEL SIGLO DE ORO. Three credit hours. Lectures, readings and discussions on the leading plays and playwrights of Spain's Golden Century (1500-1650).
157. LOPE DE VEGA. Three credit hours. A study of his life and work. Reading of representative plays.
159. LOPE Y CALDERON. Three credit hours. A comparative study of the ideas, poetry, and dramatic techniques of these famed playwrights.
160. THE PROSE OF THE NINETEENTH CENTURY. Three credit hours. A study of the main works in prose of this century with emphasis upon the novels of Galdos and Pereda.

162. THE POETRY OF THE NINETEENTH CENTURY. Three credit hours. A study of representative Spanish and Latin-American poets of the period.
163. NINETEENTH AND TWENTIETH CENTURY DRAMA. Three credit hours. A study of selected plays of representative dramatists of the epoch.
170. MODERN SHORT STORY. Two or three credit hours. Lectures, readings and discussions on the best known short stories of the period.
172. "MODERNISMO" AND THE GENERATION OF 1898. Three credit hours. A study of early contemporary literary production in Spain and in Latin America.
174. HISPANIC CIVILIZATION. Three credit hours. A summary of the essential characteristics of Hispanic civilization and its contribution to the Occidental world.
180. SPANISH AUTHORS, I. Three credit hours. A survey of the leading figures in Spanish letters. Selected readings and discussions.
181. SPANISH AUTHORS, II. Three credit hours. A continuation of Sp 180.
182. PRESENT-DAY LITERARY CURRENTS. Three credit hours. The course presents the various literary trends in Spain and in Latin America from the mid-'20's to the present.
194. SELECTED READINGS. Credit to be arranged. Directed reading and study for summer and special students. Course offered by arrangement with Chairman of the Department.

Philosophy (Pl)

Staff: FR. KENNEY, *chairman*; FR. CURRAN, DR. DUMONT, DR. GENDREAU, DR. KEARLEY, FR. MCPARTLIN, MR. MAGNER, MR. MARRERO, FR. OFFENHEIM, FR. SCHMIDT, FR. TRACY.

Assisted by: MRS. ADAMS, MR. SAUTER.

UNDERGRADUATE DIVISION

Lower Division Course

34. LOGIC. Three or four credit hours. A course in Scholastic logic; the theory and rules of logical habits. Prerequisite to all courses in philosophy; may be taken concurrently with Ps 31.

Upper Division Courses

100. **METAPHYSICS.** Three credit hours. The science of the first principles of being: the concept and modes of being; the transcendentals; theories of analogy, act and potency; the Aristotelian categories emphasizing substance and relation; the theory of efficient causality and of purpose.
105. **PHILOSOPHY OF NATURE.** Three credit hours. An historical study of the basic problems concerning metaphysics of matter; the continuum, quantity, mechanicism, space, place, motion, time and constitution of matter.
106. **NATURAL THEOLOGY.** Three credit hours. An inductive inquiry into the question of Infinite Reality culminating in the philosophy of Infinite Being; a purely rational study of the nature and properties of Infinite Being. Prerequisite: Pl 100.
107. **PHILOSOPHY OF HUMAN KNOWLEDGE.** Three credit hours. A philosophical investigation of the problem of knowledge, of certainty, of error, and of the varieties of cognitive means with their results. Prerequisite: Pl 111.
111. **PHILOSOPHICAL PSYCHOLOGY.** Three credit hours. The unity of man; his generic and specific attributes; the origin of human knowledge; intellect, will, freedom, habits; the constitution of man; theories of the soul. (Ps 111)
131. **PRINCIPLES OF ETHICS.** Three credit hours. The science of the first principles of human goodness; the purpose of human life; the human act; morality and its essential norm; the general theory of law and rights; conscience; virtue. Prerequisite: Pl 111.
132. **PERSONAL AND SOCIAL ETHICS.** Three credit hours. A philosophical exposition of the rights and duties of the individual on the basis of ethical norms; the origin and theories of society; the social, economic and political relationships of the individual. Prerequisite: Pl 131. *Required of all degree students as Christian Culture.*
133. **HISTORY OF MODERN PHILOSOPHY.** Three credit hours. A study of major philosophical systems from 1600 to contemporary times emphasizing basic philosophical positions underlying present-day thought.
135. **AMERICAN PHILOSOPHY AND CHRIST.** Three credit hours.
146. **PHILOSOPHY OF ART.** Three credit hours. An examination of the basic philosophical implications in the creation of art, with emphasis on the premises of art appreciation. Inductive

- analysis to discern the laws of progress in art; art as a kind of knowledge; the production of the art object; the beauty, morality, and meaning of the artifact.
150. **PHILOSOPHICAL THINKING.** Three credit hours. A first course in philosophy for mature graduate students.
 151. **HISTORY OF ANCIENT PHILOSOPHY.** Three credit hours. Philosophical thought of Western civilization beginning with Thales and other pre-Socratics; the birth of perennial philosophical questions and their development through Plato and Aristotle to the Neo-Platonists.
 161. **HISTORY OF MEDIEVAL PHILOSOPHY.** Three credit hours. A survey of philosophical thought from Augustine to the close of the fourteenth century. Cultural setting for intellectual controversies of the period together with problems and solutions offered by the Masters of the Middle Ages.
 170. **CURRENT PROBLEMS IN CATHOLIC PHILOSOPHY.** Three credit hours. The response of Catholic philosophers to the impetus of Existentialism, Linguistic Analysis, Phenomenology; varieties of Christian Personalism.
 181. **HISTORY OF CONTEMPORARY PHILOSOPHY.** Three credit hours. A survey of European and American philosophical thought of the Modern Era.
 190. **SEMINAR: PHILOSOPHY AND SCIENCE.** Three credit hours. Open to seniors, philosophy and science majors, who are superior students and are approved prior to registration by the professor. The seminar is limited to twenty students, is offered in fall semester, and fulfills philosophy elective requirement.
 195. **SPECIAL STUDY.** Credit to be arranged.
 - 198a. **PHILOSOPHY OF SAINT THOMAS.** Five credit hours. Special studies for Honors A.B. students using Latin selections from Saint Thomas.
 - 198b. **PHILOSOPHY OF SAINT THOMAS.** Five credit hours. A continuation of Pl 198a.
 - 199a. **SENIOR COMPREHENSIVE REVIEW.** One credit hour. Required of all seniors majoring in philosophy.
 - 199b. **SENIOR COMPREHENSIVE REVIEW.** One credit hour. Required of all seniors majoring in philosophy.

GRADUATE DIVISION

The Master's program aims at a high development of penetration into the Thomistic principles of philosophy; a knowledge of the major philosophical positions developed in Western civilization; an analytic mentality capable of formulating a problem and finding its solution; a critical approach to the thought of other philosophers; a strong degree of the habit of philosophy itself.

The minimum requirements for a Master of Philosophy degree are:

1. Completion of twenty-four semester hours of course work inclusive of Pl 151 or 161, 206, 210, 222, 265, 270, 274 or their equivalents.
2. Master's thesis, Pl 299, six semester hours.
3. Comprehensive examination on course work and thesis.

Graduate Courses

206. THOMISTIC THEORY OF KNOWLEDGE. Three credit hours.
210. THOMISTIC METAPHYSICS. Three credit hours.
228. PHILOSOPHICAL PROBLEMS IN MODERN SCIENCE. Three credit hours.
241. CONTEMPORARY ETHICAL PROBLEMS. Three credit hours.
245. PHILOSOPHY OF AESTHETICS. Three credit hours.
252. PLATO: MAJOR DIALOGUES. Three credit hours.
254. ARISTOTLE. Three credit hours.
261. AUGUSTINE OF HIPPO. Three credit hours.
263. PHILOSOPHY OF SAINT BONAVENTURE. Three credit hours.
264. THOMAS AQUINAS: INTRODUCTION TO THE TEXT. Three credit hours.
265. THOMAS AQUINAS: ON BEING AND ESSENCE. Three credit hours.
276. EXISTENTIALIST AND LINGUISTIC ANALYSIS. Three credit hours.
287. AMERICAN PRAGMATISTS. Three credit hours.

298. SPECIAL STUDY. Credit to be arranged.

299. MASTER'S THESIS. Six credit hours.

Physics (Ph)

Staff: MR. HART, *chairman*; FR. BRADLEY, MR. MARCACCIO, DR. MILLER, DR. PODOLSKY, FR. VOLLMAYER, DR. WERNER.

Assisted by: MR. FISCHER, *Director of Electronics and Machine Shops*; DR. BAHR, MR. TOEPKER.

UNDERGRADUATE PHYSICS

Lower Division Courses

3. COLLEGE PHYSICS. Four credit hours each semester. This is a terminal course covering mechanics, heat, sound, electricity, magnetism, and optics. Three lectures and one laboratory session per week. Prerequisite: Trigonometry.
9. UNIVERSITY PHYSICS I, II. Three or four credit hours each semester. This is a general physics course for science majors: it covers mechanics, heat, sound, electromagnetism, and modern physics. Three lecture sessions and one laboratory session per week. Calculus should be taken concurrently in at least the second semester.
11. ELECTRIC CIRCUIT THEORY. Two credit hours of lecture and two of laboratory. Direct-current circuit problems; transient and steady state solutions for some RLC circuits; series and parallel resonance; Kirchhoff's Laws in complex form; alternating current networks. Complex-number vector methods and matrices are used.
12. ELECTRONICS. Two credit hours of lecture and two of laboratory. Basic electronic circuits including power supplies, amplifiers, oscillators, and switching circuits using both vacuum tubes and transistors. Impedance relations and electronic filters. Theory of electronic measurements.
- 101, 102. ADVANCED LABORATORY I, II. Four credit hours of laboratory for the year. This laboratory is designed to introduce the student to the more advanced counterparts of the University Physics laboratory. Ellipsoids of inertia, Kater's pendulum, gyroscopic precession and nutation, forced har-

- monic oscillations, black body radiation, Fresnel diffraction, Michelson's interferometer, acoustic impedance, electrical measurements, electronics, electricity, and magnetism, atomic and nuclear experiments.
103. ADVANCED LABORATORY III, IV. Two credit hours of laboratory for the year. Stress is on atomic, nuclear physics and optical pumping.
 104. tory for the year. Stress is on atomic, nuclear physics and optical pumping.
 111. THEORETICAL MECHANICS I. Three credit hours. Calculus of vectors, conservative forces, nonlinear oscillator, forced oscillations with damping, electrical and acoustical analogues, planetary motion and the general laws of alpha-particle scattering, conservation of linear and angular momentum, coupled oscillators, and normal coordinates. Prerequisite: Mt 52.
 112. THEORETICAL MECHANICS II. Three credit hours. Rigid body motion, moments of inertia, principal axes, Euler's equations, rotation about fixed axis, energy equation, Lagrange's equations, Hamilton's equations, principle of least action. Prerequisite: Mt 106 or Mt 108.
 121. THERMODYNAMICS. Three credit hours. Thermodynamic variables and processes, internal energy of a system, first and second laws of thermodynamics, Carnot cycle, entropy and irreversibility, Gibbs's functions and Maxwell's relations, Clausius-Clapeyron and Gibbs-Helmholtz equations, van der Waals gas, phase rule, Boltzmann's distribution law, Maxwell's distribution law, Bose-Einstein statistics, Fermi-Dirac statistics. Prerequisite: Mt 106 or Mt 108.
 131. ACOUSTICS. Three credit hours. Forced oscillations with damping, acoustical-electrical-mechanical analogies, wave motion in three dimensions, interference patterns, acoustic impedance, diffraction effects. Prerequisite: Mt 106 or Mt 108.
 141. ELECTROMAGNETISM. Three credit hours. Coulomb's law, Ampere's law, Faraday's law, Maxwell's electromagnetic equations in free space and material media. Course is given in vector notation. Prerequisite: Ph 111.
 142. ELECTROMAGNETIC THEORY OF LIGHT. Three credit hours. Electromagnetic wave theory is used to derive the laws of optics; reflection, refraction, diffraction, Fresnel integrals, and theory of dispersion. Prerequisites: Mt 106, 108, Ph 141.
 143. ELECTROMAGNETIC THEORY OF LIGHT II. Three credit hours. A continuation of Ph 142.
 153. ELECTRONICS LABORATORY. Two credit hours.
 162. EVOLUTION OF MODERN PHYSICS. Three credit hours. This course is designed to bring the principles of modern physics within the grasp of people whose profession is other than that of a research physicist. The course should be of particular value to people in education who want a concentration in physics. Topics include electromagnetic theory, relativity, quantum mechanics, and atomic and nuclear physics as well as the relations between these topics and modern philosophy. Since the course is as rigorous as ordinary language will allow, even the physics student can expect to benefit by obtaining a more profound respect for the conciseness of mathematical equations. Prerequisite: Equivalent of general physics.
 164. MODERN PHYSICS I, II. Three credit hours each semester.
 165. The first semester topics include relativistic mechanics from the special theory of relativity, the fundamental ideas involved in the general theory of relativity including the use of tensor calculus, and an introduction to quantum mechanics. The second semester is a continuation of quantum mechanics. Prerequisite: Theoretical Mechanics Ph 111.
 172. ANALOG COMPUTER WORKSHOP IN PHYSICS. Three credit hours. This course is an innovation of a unique teaching machine—the analog computer. A survey of differential calculus, integral calculus, and some elementary differential equations will be presented as they apply to certain problems in physics. A review of electrical circuits on the level of a general physics course will be given as the background for understanding the analog computer. Thereafter, all students will be given the opportunity to study various properties of functions by programming them on the computer.
 174. ADVANCED STUDY OF BASIC PHYSICS I, II. Three credit hours each semester. This course gives the student an opportunity to understand the broad implications of the fundamental principles of general physics. Emphasis is placed on the proper pedagogical exposition of basic principles as they should be related to beginning students; hence this course should benefit current and prospective high school teachers. Prerequisite: General Physics or the equivalent.
 176. ADVANCED STUDY OF INTERMEDIATE PHYSICS I, II. Three credit hours each semester. This course extends the approach
 - 177.

used in Ph 174, 175 to the intermediate subjects of mechanics, thermodynamics, electromagnetism, and optics. Prerequisite: General Physics.

178. PHYSICS OF THE ATOM. Three credit hours. A presentation designed to familiarize the student with recent refinements and extension of human experience through observation of phenomenon characterized by the atomic constants such as the masses and charges of "elementary" particles, the speed of light, and the quantum of action. Among topics treated are the Bohr atom, photoelectric effect, Zeeman effect, Compton effect, Stern-Gerlach effect, vector model and atomic spectra, beta-decay and helicity, strangeness, optical pumping, and light amplification by stimulated emission of radiation.
180. (GEOPHYSICS.) INTRODUCTION TO GEOPHYSICS. Three credit hours. Prerequisite: Ph 12.
182. (GEOPHYSICS.) ELEMENTARY SEISMOMETRY. Two credit hours.
197. SPECIAL READING AND STUDY FOR ADVANCED STUDENTS. Credits to be arranged.
199. SENIOR COMPREHENSIVE REVIEW. Two credit hours.

GRADUATE DIVISION

Principal Courses. Required of all students.

210. CLASSICAL ANALYTICAL MECHANICS. Three credit hours. Mechanical principles and mathematical methods useful in relativity quantum mechanics including the variational principle, rigid body motion, elasticity, Hamilton's equations and canonical transformations, Hamilton-Jacobi theory, and an introduction to relativistic mechanics.
220. RELATIVISTIC ELECTRODYNAMICS. Three credit hours each semester. Relativistic Electrodynamics as an example of a theory. The nature of a theory, general principles underlying both Newtonian mechanics and special theory of relativity. The assumption of superposition, the full theory of Electrodynamics, and the Maxwell-Lorentz equations. Difficulties resulting from the fact of existence of electrons.
230. QUANTUM MECHANICS. Three credit hours each semester.
231. Some fundamental experiments of atomic physics. De Broglie waves and properties of wave packets. Uncertainty relation. Schroedinger's equation applied to the hydrogen atom and the harmonic oscillator. Quantum Mechanical operators in

Hilbert space, matrix formulation of Q.M., perturbation theory, theory of measuring process, angular momentum and spin, Dirac's electron.

Other Courses:

200. SEMINAR: STUDENT PRESENTATIONS. Credit assigned.
201. GRADUATE EXPERIMENTAL PHYSICS. One to four credit hours.
211. CLASSICAL ANALYTICAL MECHANICS II. Three credit hours. Second semester of Ph 210. Offered occasionally.
240. SEMINAR: QUANTUM BEHAVIOR OF SYSTEMS. Three credit hours. Classical concepts demanded by the quantum theory as a rational generalization of classical physics. A contemporary approach to the quantum, based upon recent experiments such as the ESAB effect, optical pumping, and superconductivity. Subtleties of quantum wholeness, such as the Einstein-Podolsky-Rosen effect, explained through quantum behavior in the configuration space of a system. Quantum implications for the theory of knowledge, with particular emphasis on Bohr's account of his discussions with Einstein.
242. SEMINAR: PHYSICAL INTERACTION. Three credit hours. A sequel to Quantum Behavior of Systems. A further exploration into the extensive emendations of Newtonian mechanics involved in relativistic electrodynamics and quantum mechanics. The central role of interaction in questions of measurement, separability, wholeness, and extension of behavior. Reports and discussions of current investigation by the instructor and some of the students into nuclear, electromagnetic, Fermi, and gravitational interactions.
244. SEMINAR: CONSTANTS OF NATURE. Three credit hours.
246. SEMINAR: OUTSTANDING PROBLEMS IN PHYSICS. Three credit hours.
248. SEMINAR: THEORY OF ACTIVE OBSERVATION. Three credit hours.
280. SPECIAL TOPICS: (TOPIC TO BE SPECIFIED). Three credit hours. From time to time special topics will be offered as Ph 280. These include Statistical Mechanics, Electronics, Nuclear Physics, Solid State Theory, Fluid Dynamics, Plasma Physics, Gravitation and General Relativity, and Applied Mathematical Physics.
297. SPECIAL READINGS: AREA TO BE SPECIFIED. One to three credit hours.

298. RESEARCH IN: AREA TO BE SPECIFIED. One to three credit hours.

299. MASTER'S THESIS. Six credit hours.

Supporting Courses:

The student, with his advisor's specific approval, may elect supporting courses in other departments such as Mathematics, Chemistry, and Biology.

Psychology (Ps)

Staff: DR. BIELIAUSKAS, *chairman*; DR. CLARKE, DR. FEUSS, FR. D. FOLEY, DR. KRONENBERGER, MR. LA-GRANGE, DR. MARR, MR. MORRA, DR. QUATMAN, FR. TRAINOR.

Assisted by: DR. COHEN, DR. FAETH, DR. FRANKEL, DR. LIPPERT, FR. MALONE, DR. MILLER, SR. JOHN BOSCO RYAN, MR. SETA.

Graduate Fellows: MR. BAYER, MR. FEDORAVICIUS, MR. MANG.

UNDERGRADUATE DIVISION

Lower Division Courses

31. GENERAL PSYCHOLOGY. Three credit hours. A study of facts and principles concerning human behavior. This course attempts to acquaint the student with the understanding of basic psychological processes such as sensation, perception, motivation, learning, psychological measurements, and personality development. Offered to sophomores majoring in various departments including the Department of Psychology.
32. ADVANCED GENERAL PSYCHOLOGY. Three credit hours. A course specially designed for psychology majors, minors, and those interested in taking more advanced courses in psychology. Special attention given to the scientific methodology in psychology and its application to experimental studies in the areas of perception, motivation, thinking, memory, learning, and individual differences. Prerequisite: Ps 31.
41. EDUCATIONAL PSYCHOLOGY. Three credit hours. Psychological principles applied to learning and teaching. Prerequisite: Ps 31. (Ed 41)

Upper Division Courses

101. EXPERIMENTAL PSYCHOLOGY I. Three credit hours. Introduction to experimental methods in psychology; key statistical techniques, journal reading, and report writing. Experiments deal with visual processes, learning, transfer, problem solving, association, and attention. One hour lecture and four hours' laboratory per week. Prerequisites: Ps 31, Ps 32, and the instructor's approval.
102. EXPERIMENTAL PSYCHOLOGY II. Three credit hours. Directed experiments on animal and human subjects, emphasizing planning, instrumentation, controls, and logical analysis of results. One hour lecture period and four hours' laboratory periods per week. Prerequisite: Ps 101 and the instructor's approval.
103. DEVELOPMENTAL PSYCHOLOGY. Three credit hours. A study of those factors which significantly influence the life span of man from childhood to old age, with application to the stages of physiological maturation, developmental tasks, social learning, and personality integration.
104. EXPERIMENTAL PSYCHOLOGY. Five credit hours. Similar to Ps 101. Summers only.
111. PHILOSOPHICAL PSYCHOLOGY. Three credit hours. The specific attributes of man; origin of human knowledge; intellect, will, freedom, habits; the constitution of man; theories of the soul; the unity of man; person. (Pl 111.) Prerequisites: Pl 34, Ps 31.
118. INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ed 118)
119. GUIDING THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ed 119)
121. THE BIOLOGICAL BASIS OF ANIMAL BEHAVIOR. Four credit hours. A comparative study of the physiology and morphology of the nervous system and sensory receptors, with special emphasis on the adaptation of animal life to environmental changes. Two lectures and four hours of laboratory. Prerequisites: Bl 1 and 2, or Bl 3 and 4. (Bl 121)
128. INDUSTRIAL PSYCHOLOGY. Two or three credit hours. A review of the principles of sound psychological procedure as applied to personnel in commerce and industry. Concentration upon the human element in American industry. Lectures by plant and industrial psychologist. (IR 128)

131. **PSYCHOLOGICAL AND ACHIEVEMENT TESTS.** Three credit hours. A survey of commonly used group tests; testing procedures, and rationale underlying these tests; tests of intelligence, aptitude, achievement, interest, and personality critically examined; procedures described for selecting and evaluating specific group tests in these areas. Two lectures and two laboratory periods per week. (Ed 131) (Mg 131)
134. **CHILD PSYCHOLOGY.** Two credit hours. The genetic study of growth and development; hereditary and environmental factors; early and later childhood to puberty. (Ed 134)
135. **ADOLESCENT PSYCHOLOGY.** Two credit hours. Interrelated physical, physiological, and mental changes associated with adolescence. (Ed 135)
136. **ABNORMAL PSYCHOLOGY.** Two or three credit hours. Dynamics of a disturbed personality; symptoms, causes, and treatment of psychoneuroses, psychoses, and deviant personalities. Theoretical descriptions are illustrated through visual aids and field trips. (Ed 136)
138. **STATISTICAL TECHNIQUES.** Two or three credit hours. A study of basic statistics used in psychology and education, including sampling techniques, measures of central tendency, variability, and simple correlation. Two lectures and two laboratory periods per week. (Ed 138)
142. **MENTAL HYGIENE.** Two credit hours. A study of the progressive stages of development in emotional growth. Factors of adjustment and maladjustment in education, social relations, and occupations. (Ed 142)
151. **HISTORY AND SYSTEMS OF PSYCHOLOGY.** Two or three credit hours. A study of modern scientific psychology including its various schools and their backgrounds. Reading in a broad field of psychological theory required. (Ed 151)
153. **PHYSIOLOGICAL PSYCHOLOGY.** Three credit hours. Neuroanatomy and neurophysiology of the central nervous system including sensory and motor processes. The autonomic systems, their function and their relation to emotion. Activation levels and the neuro-hormonal bases of motivation. Neural basis of conditioning and higher forms of learning. Brain disorders and their causes and treatment.
155. **DYNAMIC PSYCHOLOGY.** Two credit hours. Critical appreciation of personality concepts and methodology of various psychotherapeutic schools. While special attention is given to Freud's contribution, other schools considered are

- Adlerian, Jungian, Rankian, Existential Therapy, and Client-Centered Therapy. (Ed 155)
156. **PSYCHOLOGY OF DELINQUENCY.** Two credit hours. A treatment of the types and causes of juvenile delinquency together with brief case histories. (Ed 156)
158. **SOCIAL PSYCHOLOGY.** Two credit hours. A study of the individual's personality, attitudes, and behavior in multi-individual situations. (Ed 158)
170. **DIFFERENTIAL PSYCHOLOGY.** Two credit hours. The existence, extent, and significance of individual differences in human traits. The role of heredity and environment in producing individual differences. Psychological analysis of sex, racial, national, and other group differences. (Ed 170)
177. **THEORIES OF PERSONALITY I.** Two credit hours. Contributions of psychology to the study and understanding of human personality; meaning and application of different concepts in description of personality dynamics; an anthropological analysis of man; his basic emotions, their mutual relationships, and their meaning; sources of personality formation; evaluation of current personality theories. (Ed 177)
178. **THEORIES OF PERSONALITY II.** Two credit hours. A continuation of Ps 177. (Ed 178)
180. **INTRODUCTION TO PROJECTIVE TECHNIQUES.** Two or three credit hours. Theory and rationale of projective techniques. Introduction to the Rorschach technique, Thematic Apperception Test, Szondi Test, visual-motor tests, drawing techniques, and word association tests. Tests are described, and clinical illustrations are presented with case histories. (Ed 180)
186. **PSYCHOLOGY PRACTICUM.** Three credit hours. Practical experience in administering of group tests; scoring and interpretation. Prerequisite: Ps 131 and the instructor's approval.
195. **READINGS IN PSYCHOLOGY.** Either semester: one, two, or three credit hours. The student undertakes a library research project which he performs with the assistance and under supervision of one staff member. He is to write a paper and pass an oral examination at the end of the semester. For seniors and graduate students only.
199. **SENIOR COMPREHENSIVE REVIEW.** Two credit hours. Required of all majors in their senior year. An original research

project may be substituted for this requirement upon approval of the Chairman of the Department. Prerequisite: Senior standing and instructor's approval.

GRADUATE DIVISION

The Department of Psychology of the Graduate School offers a program leading toward the Master of Arts in Psychology. This program aims to prepare students for continuing their graduate studies at the doctoral level and for employment in clinical, counseling, and industrial psychology. To insure a broad advanced knowledge of psychology, all students must take the core curriculum. They are then allowed to select their area of specialization.

Core Curriculum Courses

- 177. THEORIES OF PERSONALITY I AND II. Two credit hours each semester. The study and understanding of human personality. Concepts utilized in personality dynamics. Anthropological analysis of man, his basic emotions, and their interrelationships. Evaluation of current personality theories.
- 201. CONTEMPORARY THEORIES IN PSYCHOLOGY. Three credit hours. An evaluative review of the concepts which are basic to current theory, research, and practice in psychology and its major divisions.
- 202. ADVANCED EXPERIMENTAL PSYCHOLOGY. Three credit hours. Intensive survey of experimental procedures and findings; utilization of laboratory equipment; introduction to individual laboratory research.
- 214. ADVANCED STATISTICS. Three credit hours. Review of elementary correlation. Serial correlation and other correlation methods. Use of multiple regression and discriminant analysis with psychological data. Simple analysis of variance. Basic statistical considerations in dealing with small samples. Prerequisite: Ps 138 or equivalent.
- 249. SEMINAR: ARISTOTLE, DE ANIMA. Three credit hours. A study of the historical development of basic psychological concepts from Aristotle to the present. Interrelations between science, psychology, and philosophy.
- 283. PROFESSIONAL PROBLEMS IN PSYCHOLOGY. One credit hour. Basic principles of ethics and their application to psychological theory, research, and practice. Case studies.

Open to Graduate Students Only

- 201. CONTEMPORARY THEORIES IN PSYCHOLOGY. Three credit hours.
- 202. ADVANCED EXPERIMENTAL PSYCHOLOGY. Three credit hours.
- 203. EDUCATIONAL PSYCHOLOGY. Three credit hours. (Ed 203)
- 204. DEVELOPMENTAL PSYCHOLOGY. Three credit hours. (Ed 204)
- 208. LEARNING AND MOTIVATION. Two or three credit hours.
- 209. PSYCHOPATHOLOGY. Two credit hours.
- 214. ADVANCED STATISTICS. Three credit hours. Prerequisite: Ps 138.
- 220. CLINICAL STUDIES; THE EMOTIONALLY DISTURBED CHILD. Two credit hours.
- 232. VOCATIONAL AND EDUCATIONAL GUIDANCE. Two credit hours. (Ed 232)
- 233. COUNSELING PRINCIPLES AND TECHNIQUES. Two credit hours. (Ed 233)
- 235. OCCUPATIONAL INFORMATION AND JOB ANALYSIS. Two credit hours. (Ed 235)
- 237. INDIVIDUAL TESTS OF INTELLIGENCE. Two to four credit hours. (Ed 237)
- 241. DESIGN OF EXPERIMENTS. Three credit hours.
- 242. MARKETING RESEARCH. Three credit hours. (BA 242)
- 245-6. PROJECTIVE TECHNIQUES I AND II. Six credit hours.
- 249. SEMINAR: ARISTOTLE, DE ANIMA. Three credit hours.
- 251. SEMINAR: SPECIAL TOPICS. Three credit hours.
- 252. MONTESSORI EDUCATION: PSYCHOLOGICAL BASES. Three credit hours. (Ed 252)
- 253. MONTESSORI EDUCATION: HISTORICAL, THEORETICAL AND DEVELOPMENTAL ASPECTS. Three credit hours. (Ed 253)
- 258. COMMUNICATION. Three credit hours.
- 261. PERSONNEL SELECTION AND EVALUATION TECHNIQUES. Three credit hours.

265. COUNSELING AND PSYCHOTHERAPY. Three credit hours.
280. REMEDIAL READING. Two or three credit hours. (Ed 280)
281. PRACTICUM IN REMEDIAL READING. Two to four credit hours. (Ed 281)
282. PRACTICUM. Three to six credit hours.
283. PROFESSIONAL PROBLEMS IN PSYCHOLOGY. One credit hour.
284. ROLE AND FUNCTION OF SCHOOL PSYCHOLOGIST. Two credit hours.
- 285-8. WORKSHOPS AND INSTITUTES. Titles to be announced. One, two, or three credit hours.
- 297-8. RESEARCH IN PSYCHOLOGY. Titles to be specified. Three credit hours.
290. INTERNSHIP IN SCHOOL PSYCHOLOGY. Three credit hours each semester.
299. MASTER'S THESIS. Six credit hours.

Courses Open to Graduate and Advanced Undergraduate Students

(For course descriptions see preceding pages.)

121. BIOLOGICAL BASIS OF ANIMAL BEHAVIOR. Four credit hours. (BI 121)
131. PSYCHOLOGICAL AND ACHIEVEMENT TESTS. Three credit hours. (Ed 131)
134. CHILD PSYCHOLOGY. Two credit hours. (Ed 134)
135. ADOLESCENT PSYCHOLOGY. Two credit hours. (Ed 135)
136. ABNORMAL PSYCHOLOGY. Two or three credit hours. (Ed 136)
138. STATISTICAL TECHNIQUES. Two or three credit hours. (Ed 138)
151. HISTORY AND SYSTEMS OF PSYCHOLOGY. Three credit hours. (Ed 151)
155. DYNAMIC PSYCHOLOGY. Two credit hours. (Ed 155)
156. PSYCHOLOGY OF DELINQUENCY. Two credit hours. (Ed 156)
158. SOCIAL PSYCHOLOGY. Two credit hours. (Ed 158)

169. INDUSTRIAL PSYCHOLOGY. Two or three credit hours. (Mg 128)
170. DIFFERENTIAL PSYCHOLOGY. Two credit hours. (Ed 170)
- 177-8. THEORIES OF PERSONALITY I AND II. Four credit hours, two each semester. (Ed 177-8)

Sociology (So)

Staff: FR. HERRIGAN, FR. McEVOY, FR. PRICKRIL, MISS DWYER, DR. IUTCOVICH, MR. RUNDLE.

The Department of Sociology is administered by the Dean of the College of Arts and Sciences.

Lower Division Courses

31. INTRODUCTION TO SOCIOLOGY. Three credit hours. A course in the foundational postulates of a science of society; evolution of social theory; psychological, ecological and cultural approaches to a study of man and social institutions; problems of race and population; sociological features and functions of the family; sociology of the state.
36. SOCIAL HYGIENE. Two credit hours.

Upper Division Courses

103. PROBLEMS OF LABOR. Two or three credit hours. (IR 122)
109. POLITICAL THOUGHT. Three credit hours. (Po 131)
110. POLITICAL THOUGHT. Three credit hours. (Po 132)
111. SOCIAL CASE WORK. Two or three credit hours. (Ed 111)
125. MARRIAGE. Two credit hours. Origin and history of marriage as a natural institution; Christian marriage; practical and intelligent approach to marriage; marriage regulation by church and state; marriage today and tomorrow.
126. THE FAMILY. Two credit hours. Origin and history of the family; the family in other cultures as compared with the Christian family; the family in the United States and in Latin America; the rich family life, happiest human group or institution; the family as a functional unit, as the best educational channel to democratic citizenship, and as the basis for sound society.
132. PERSONAL AND SOCIAL ETHICS. Three credit hours. (PI 132)
140. MODERN URBAN SOCIETY. Three credit hours.

155. SOCIAL CLASSES IN THE UNITED STATES. Three credit hours.
158. SOCIAL PSYCHOLOGY. Two credit hours. (Ps 158, Ed 158)
161. SOCIETY AND RACE. Three credit hours.
170. CATHOLIC THOUGHT ON CONTEMPORARY SOCIAL PROBLEMS. Three credit hours. Secularized education and its social consequences. Communism, racism, industrial unrest, and population optimum, both quantitative and qualitative.
180. CULTURAL ANTHROPOLOGY. Three credit hours.
195. REBUILDING THE SOCIAL ORDER. Two credit hours. Rebuilding the social order; the Catholic social movement; the Papal social program; ineffective remedies; state and social reconstruction; practical programs of action. (Po 195)

Theology (Th)

Staff: FR. BRUEGGEMAN, *chairman*; FR. J. CREIGHTON, FR. FISCHER, FR. T. FOLEY, FR. HARRIGAN, FR. MCEVOY, FR. E. O'CONNOR, FR. PRICKRIL, FR. SCHWIND, FR. WHEELER.

The four courses required of Catholic students (Th 40, 41, 42, 43) comprise what is known as the LeMoyné plan of college Theology. The characteristics of this plan are that it is Scriptural and Christological. The principle which gives unity to the courses is the truth that the essence of the "good news" of the Gospel is the new life which we have in God through Christ. Each particular theological truth will be studied in relation to this central fact.

In keeping with the religious purpose of the University, non-Catholic students are required to take Th 3 and 5. The content of these courses meets the need for religious instruction without the elements of controversy.

UNDERGRADUATE DIVISION

Lower Division Courses

3. FOUNDATIONS OF NATURAL RELIGION. Two credit hours. An approach to religion in the light of reason. A survey of the history of religion emphasizing the principles of certitude, the existence of God, the nature of man, the necessity of religion, and moral responsibility. *Required of non-Catholic students.*
5. THE DESTINY OF MAN. Two credit hours. A study of man's free will, his immortal soul, and his consequent destiny, his

happiness or punishment in the future life as these can be known in the light of reason. *Required of non-Catholic students.*

40. CHRIST IN THE GOSPELS. Two credit hours. A study of the individual histories of the life of Christ in the four Gospels: their background, interpretation, credibility, and inspiration. The life of Christ is then studied as an organic whole, with special emphasis on Christ as Prophet, revealing Himself as the Divine Messiah, and as King, endowed with Divine authority and power, which He communicated to His Church. *Required of Catholic students.*
41. CHRIST, OUR REDEEMER. Two credit hours. The priesthood and sacrifice of Christ, studied in the Passion and the Holy Sacrifice of the Mass. A doctrinal study of the redemption and the resurrection of humanity in Christ, its Head, out of the death of sin into which Adam's disobedience had plunged it. *Required of Catholic students.*
42. CHRIST IN HIS CHURCH. Two credit hours. A study of the Mystical Body of Christ, His Church, as seen in the Acts of the Apostles and in the Epistles of St. Paul: considering both the external and internal life of the Church, dogmatic development as well as the hierarchical structure of the Church. *Required of Catholic students.*
43. CHRIST IN THE CHRISTIAN SOUL. Two credit hours. A more thorough consideration of the life and power of Christ as they exist in the individual lives of the members of the Mystical Body: the application and function of faith, justification, the life of grace, the theological and moral virtues, in relationship to the perfection of the individual. *Required of Catholic students.*

Upper Division Courses

110. THE ECUMENICAL COUNCILS. Three credit hours.
115. PROTESTANT CHURCHES IN THE UNITED STATES. The historical background of the major Protestant denominations, a study of the doctrine, ritual, and organization of each sect, and a comparison of individual sects with one another and with the Catholic Church. The course is expository rather than controversial. Its purpose is to give the student a better understanding of the various Protestant sects.
120. SPIRITUAL EXERCISES OF SAINT IGNATIUS. Three credit hours. A study of the ascetical exercises of Saint Ignatius of Loyola reflecting their historical backgrounds and effectiveness in the formation of mature Christianity.

128. **THEOLOGY OF THE SACRED HEART.** Three credit hours. To establish personal conviction of the centrality of devotion to the Sacred Heart in the life of a Christian, recent Papal documents—*Annum Sacrum*, *Misericordissimus Redemptor*, and *Haurietis Aquas*—will be studied. The foundation of this devotion in the Old and the New Testaments, the theology and history of acts of consecration and of reparation, and the devotion of Saint Margaret Mary to the Sacred Heart will be analyzed.
140. **THE SUPERNATURAL LIFE OF MAN (THEOLOGY OF GRACE).** Three credit hours. A study of the supernatural destiny of man and the nature and process of justification. Special attention is devoted to sanctifying and actual grace; the theological virtues of faith, hope and charity; the gifts of the Holy Ghost. Chief means of preserving and developing supernatural life: prayer, sacraments and the holy sacrifice of the Mass are explained.
145. **THEOLOGY OF SAINT PAUL.** Three credit hours. An introduction to the principal ideas stressed by Saint Paul in his epistles. Through historical survey of man, his times and environment deeper insight to the significance of his key ideas is sought. Special attention is given to Christology, the Pauline concept of original sin and the process of justification, and the relationship between the old and new law.
150. **MORAL PRINCIPLES IN GUIDANCE.** Two or three credit hours. Principles of moral Theology as applied particularly in student guidance and counselling. (Ed 150)
165. **THE MODERN THEOLOGY OF THE MYSTICAL BODY AND LITURGY.** Three credit hours. Recent developments in the theology of the Church (the *Mystical Body* or the *People of God*), as expounded in the latest documents of Vatican II,
 (1) Paul VI's *Ecclesiam Suam* of August 6, 1964
 (2) Paul VI's *De Ecclesia* of November 21, 1964
 (3) Paul VI's Constitution on the Liturgy of December 4, 1963,
 as contrasted or compared with Pius XII's Encyclical on the *Mystical Body* of June 29, 1943, with emphasis on the instrumental causality of the Church in the subjective redemption of mankind.
170. **THE NEW LITURGICAL THEOLOGY.** Three credit hours. A thorough commentary on the *Constitution on the Sacred Liturgy*, of Dec. 4, 1963. Background for reform of the Liturgy. Practical norms to attain reform and promote the Liturgy. Liturgy and doctrine: The Paschal Mystery; the

Risen Christ; the History of Salvation; the Liturgy and Mystery; Sacrifice and Sacraments; priesthood of the laity; the juridical power of the bishop in the *Constitution*; concelebration; Eschatology and the Liturgy; sacred music; sacred arts; Liturgy and Christian Unity.

175. **SACRAMENTAL ENCOUNTER WITH CHRIST.** Three credit hours.

190. **INTRODUCTION TO THE BIBLE.** Two or three credit hours. An analysis of the background of Sacred Scripture. Principles of understanding and interpretation of both the Old and the New Testament. A survey reading of the Scripture.

Christian Culture

All candidates for a degree in residence for eight semesters must have completed eight hours among the courses listed below. Pl 132 and So 125 are required for all degrees.

- Ec 132. **ECONOMIC THEORY AND SOCIAL ORDER.** Three credit hours.
- Gk 104. **CHRISTIAN ANTIQUITY.** Three credit hours.
- Hs 104. **CHRISTIAN ANTIQUITY.** Three credit hours.
- Hs 111. **THE EARLY MIDDLE AGES, 300-1154.** Three credit hours.
- Hs 112. **THE HIGH MIDDLE AGES, 1154-1496.** Three credit hours.
- Hs 119. **RENAISSANCE AND HUMANISM.** Three credit hours.
- Hs 121. **RELIGIOUS UPRHEAVAL IN THE 1500's.** Three credit hours.
- Hs 149. **THE CATHOLIC CHURCH IN THE UNITED STATES.** Three credit hours.
- Lt 122. **INTRODUCTION TO A STUDY OF THE LATIN FATHERS.** Three or four credit hours.
- Lt 135. **EARLY CHRISTIAN POETS.** Three credit hours.
- Pl 132. **PERSONAL AND SOCIAL ETHICS.** Three credit hours. Required of all degree students as Christian Culture.
- Pl 135. **AMERICAN PHILOSOPHY AND CHRIST.** Three credit hours.
- Pl 170. **CURRENT PROBLEMS IN CATHOLIC PHILOSOPHY.** Three credit hours.
- Pl 190. **SEMINAR: PHILOSOPHY AND SCIENCE.** Three credit hours.
- So 125. **MARRIAGE.** Two credit hours.
- So 126. **THE FAMILY.** Two credit hours.
- So 195. **REBUILDING THE SOCIAL ORDER.** Two credit hours.
- Th All upper division courses.

Departments— The College of Business Administration

Accounting (Ac)

Staff: MR. WILZ, *chairman*; MR. BEHLER, MR. MALY,
MR. SCHWEIZER, MR. SMITH, MR. WALKER.

Assisted by: MR. FINUCAN, MR. GRATTON, MR. SCHLEGEL,
MR. L. SELZER, MR. TILTON, MR. SCHUTZMAN.

UNDERGRADUATE DIVISION

Lower Division Courses

51. PRINCIPLES OF ACCOUNTING. Three credit hours. Elementary principles and procedures supplemented with practical problems and practice sets.
52. PRINCIPLES OF ACCOUNTING. Three credit hours. A continuation of Ac 51 which is also prerequisite.

Upper Division Courses

100. SURVEY OF ACCOUNTING. Three credit hours. An accounting course geared to acquaint the non-accountant with the functions that underlie the creation of financial statements; the proper presentation of all items on the statement; and their use as tools by management in planning present and future business activity. (Ec 100)
109. SYSTEMS, METHODS, AND PROCEDURES. The objective of this course is to provide an understanding of the principles of business data processing systems, procedures, and methods. The structure and function of key-driven, punch-card, and electronic data processing machines are studied. Integrated data processing and work simplification concepts are stressed. Prerequisite: Ac 52.
110. MANAGERIAL ASPECTS OF DATA PROCESSING. Three credit hours. The objective of this course is to provide an understanding of electronic data processing systems in business and their effect on management organization and control. The general structure and logic of electronic computers are

explained, along with "common language" and punch-card equipment. The phases of planning for and evaluating the feasibility of EDP systems are also covered.

151. INTERMEDIATE ACCOUNTING. Three credit hours. A broad background of theory coordinated with practical problems. Prerequisite: Ac 52.
152. INTERMEDIATE ACCOUNTING. Three credit hours. A continuation of Ac 151 which is also prerequisite.
153. ADVANCED ACCOUNTING PROBLEMS. Three credit hours. Advanced study in accounting theory and related problems applicable to partnership, special sales procedures, insurance, and fiduciaries. Prerequisite: Ac 152.
154. ADVANCED ACCOUNTING PROBLEMS. Three credit hours. A continuation of Ac 153 with emphasis on parent company, subsidiary accounting, foreign exchange, and public accounts. Prerequisite: Ac 152.
155. INDUSTRIAL ACCOUNTING. Three credit hours. Study of elements involved in industrial production with special emphasis on costs and reports. Prerequisite: Ac 152.
156. INDUSTRIAL ACCOUNTING. Three credit hours. A continuation of Ac 155 which is also prerequisite.
157. TAXATION. Three credit hours. Intensive study of tax laws in relation to their underlying principles. Prerequisite: Ac 52.
158. ADVANCED TAXATION. Three credit hours. Prerequisite: Ac 157.
161. AUDITING PRINCIPLES. Three credit hours. A comprehensive study of the fundamental principles of auditing. Prerequisite: Ac 155.
162. ADVANCED AUDITING PRINCIPLES. Two or three credit hours. Prerequisite: Ac 161.
163. C.P.A. REVIEW. Three credit hours. An intensive review of theory, auditing, accounting practice, and business law based on recent examinations by the state boards and prepared by the American Institute of Certified Public Accountants. Prerequisite: Courses required for a major in accounting.
164. C.P.A. REVIEW. Three credit hours. A continuation of Ac 163.

166. ANALYSIS OF FINANCIAL STATEMENTS. Three credit hours. A study of the significance, development and technique of financial statement analyses of business enterprises. Prerequisite: Ac 52.
195. CASES AND PROBLEMS IN ACCOUNTING. Two or three credit hours.
197. TUTORIAL COURSE. Two or three credit hours.

For graduate courses in accounting see Business Administration: Graduate Division.

For the M.B.A. degree with a concentration in accounting see Graduate School: the Master of Business Administration.

Business Administration (BA)

The following are general business service courses required of all students in Business Administration. Professors are assigned to these courses by the other departments in the College of Business Administration.

23. BUSINESS CORRESPONDENCE I. Two credit hours.
24. BUSINESS CORRESPONDENCE II. Two credit hours.
190. BUSINESS STATISTICS. Three credit hours. A study of the manner of presentation of specific and general business reports for graphic determination of economic significance. A study of mathematical tools as used in business and industry including mode, mean, median and coefficient of correlation.
193. BUSINESS LAW I. Three credit hours. A general introduction to American business law. Contracts: essential, form, legality and enforcement. Property. Negotiable instruments.
194. BUSINESS LAW II. Three credit hours. General review of the introduction to business law. Creation, powers, termination, liabilities of principal and agent. Partnerships. Corporations. Recommended prerequisite: BA 193.
196. BUSINESS ADMINISTRATION PROBLEMS. Three credit hours. A case study approach is involved. Material is provided to afford opportunities for students to develop their analytical ability and decision-making skill and to utilize their imagination in devising feasible programs of action. Some descriptive material is presented to make case studies meaningful. Recommended only for seniors.

GRADUATE DIVISION

Students selecting courses for the degree of Master of Business Administration must include the four survey courses—BA 201, 202, 203 and 204—in their programs. They will include appropriate courses from the offerings of the undergraduate division numbered 100 or above. As a climax to their work they will select a 200 seminar course dealing with practical problems.

- 200A. BASIC ACCOUNTING. Four credit hours. Prerequisite for BA 203, Managerial Accounting.
- 200B. BASIC ECONOMICS. Four credit hours. Prerequisite for BA 201, Economics of Business.
- 200C. BASIC HOSPITAL ACCOUNTING. Four credit hours. Prerequisite for BA 233, Hospital Financial Management.
201. ECONOMICS OF BUSINESS. Three credit hours. Introduction to major areas of economics judged most useful to the business executive. Functions of the economic system; national income; business cycles, forecasting, government economics. Keynesian economic analysis.
202. QUANTITATIVE BUSINESS METHODS. Three credit hours. Application of quantitative methods to the solution of recurring business problems. Basic mathematical models: breakeven, forecasting, linear programming, probability, scheduling, transportation, and waiting line.
203. MANAGERIAL ACCOUNTING. Three credit hours. The contribution of accounting to efficient business administration. Basic concepts; budgeting; the operation of an accounting system; cost analysis; cost-standards; financial statements.
204. ADMINISTRATIVE OPERATION. Three credit hours. Techniques of planning, organizing, and control in business. Environmental factors; dynamics of human relations; functions; structure.
209. RESEARCH IN BUSINESS. Three credit hours. Understanding and skills necessary to the intelligent use of research in business. In this course two credit hours are devoted to research techniques and procedures. The remaining credit hour is awarded on completion of an actual research paper. A separate grade is given for each phase of the course.
210. APPLIED ECONOMIC ANALYSIS. Three credit hours. Economic analysis as applied to practical business operation. Tools of economic analysis; types of economic competition and their effect on individual firms and industries. Case study method of instruction used.

212. **BUSINESS FORECASTING.** Three credit hours.
215. **GOVERNMENT REGULATION OF BUSINESS.** Three credit hours. Analysis of the influence of Mercantilist, Classical, Keynesian, and Socialist theories on public policies towards business competition in modern industrial economies, which employ a cross-cultural and interdisciplinary approach towards the formation of a workable structure of competition as is evidenced by contemporary theories and practices in the United States, Canada, Great Britain, Europe, and Japan.
218. **ECONOMICS OF LABOR.** Three credit hours. A study of many determinants of the competitiveness of labor markets; examination of various normative frameworks for judging the propriety of public involvement in labor markets; study of economic determinants of employment levels.
220. **EXECUTIVE PRACTICES.** Three credit hours. This course is designed to demonstrate the techniques available for handling complicated human relations situations. The discussion centers around psychological (behavioral) and sociological readings and their application to actual case situations.
222. **SEMINAR: QUANTITATIVE DECISION-MAKING.** Three credit hours.
226. **MANAGEMENT PLANNING.** Three credit hours. A seminar.
240. **MARKETING THEORY AND PRACTICE.** Three credit hours. The course is designed to review basic marketing principles and to present new and significant trends and advanced theory. Case studies, discussion, and lectures are employed to develop an understanding of the nature and scope of marketing problems and how to develop workable solutions.
241. **LOCATION OF BUSINESS AND INDUSTRIAL ACTIVITY.** Three credit hours. A study of the factors that influence the location of productive facilities, and the marketing of the finished product. Interrelationship of source of supply, location of productive facilities, and the market area.
242. **MARKETING RESEARCH.** Three credit hours. Methods and techniques of marketing research; its use as a tool of management; cases in marketing research.
243. **INDUSTRIAL MARKETING.** Three credit hours. A study of the problems of marketing industrial products, including the management of the marketing channels and the pricing of the products. Also covered is the area of selling and distribution of the products.

245. **ADVERTISING: THEORY AND PRACTICE.** Three credit hours. The role of advertising in the marketing process is examined for ways in which it can be profitably employed. The advertising campaign and its creative and media components are studied to develop an understanding of the decision processes involved. Case studies are utilized. Recommended prerequisite: BA 240.
250. **PROBLEMS IN BUSINESS FINANCE.** Three credit hours. In this course the principles learned in Corporation Finance are utilized. Financing current operations, policies, promotion, expansion, combination and selected comprehensive problems involving financial analysis and planning of capital structures. Case study method of instruction used.
252. **INVESTMENT MANAGEMENT.** Three credit hours.
254. **BUDGETING PROCEDURES.** Three credit hours. Preparation of budgets and managerial use of business budgets. Budget allocation for sales, production, materials, labor, and overhead. Budget reports.
255. **CONTROLLERSHIP.** Three credit hours.
260. **PROBLEMS OF LABOR.** Three credit hours. An analysis of labor-management problems through the use of the "Incident Process."
262. **ADVANCED PERSONNEL MANAGEMENT.** Three credit hours. A case method approach to complex personnel problems at the management level.
263. **SEMINAR: COLLECTIVE BARGAINING.** Three credit hours.
270. **INTRODUCTION TO OPERATIONS RESEARCH.** Three credit hours.
274. **MATERIALS MANAGEMENT.** Three credit hours. Consideration of the materials function in an industrial organization as an integrated activity. A detailed review of inventory, purchasing and traffic operations, with a discussion of objectives and measurements. Lecture, class participation, and cases are utilized.
276. **PRODUCTION CONTROL.** Three credit hours. Course is designed to introduce students to current and advanced production and inventory control concepts and methods, emphasizing the functions inventories serve and the pressures and costs bearing upon inventory and production decisions. Recommended prerequisite: BA 190.
277. **WORK SIMPLIFICATION.** Three credit hours.
278. **QUALITY CONTROL.** Three credit hours. This course is presented as a body of technical, analytical, and managerial knowledge. The quality function is explored not only in a

statistical context but also in its effect upon the economics of cost, organizational impact, and the engineering function. Recommended prerequisite: BA 190.

280. **OFFICE MANAGEMENT.** Three credit hours. A study of the principles of management and their application to office management, and the duties and responsibilities of the office manager. The student will be given the information needed to comprehend and understand the important office management functions in today's business. The class will include lecture and case discussion.
282. **SMALL BUSINESS OPERATION.** Three credit hours. This course is designed primarily for students who work in small businesses or own businesses. Organization, location, management, finance, production, and marketing problems are studied. The course combines the lecture and case method of study.
295. **INDIVIDUAL READINGS AND RESEARCH.** Two or three credit hours. Open to especially qualified students with the consent of the Chairman of the Department.
299. **SEMINAR: IN BUSINESS PROBLEMS.** Three credit hours.

CONCENTRATION IN HOSPITAL ADMINISTRATION

230. **HOSPITAL ORGANIZATION AND ADMINISTRATION: PRINCIPLES.** Three credit hours.
231. **HOSPITAL ORGANIZATION AND ADMINISTRATION: CASES.** Three credit hours.
232. **WORKSHOP: HOSPITAL ORGANIZATION AND ADMINISTRATION.** Six credit hours.
233. **HOSPITAL FINANCIAL MANAGEMENT.** Three credit hours. Prerequisite: BA 200C.
234. **PROCUREMENT AND PURCHASING IN HOSPITALS.** Three credit hours.
235. **WORKSHOP: HOSPITAL BUSINESS MANAGEMENT.** Six credit hours.
236. **HOSPITAL PERSONNEL ADMINISTRATION.** Three credit hours.
237. **SEMINAR: HOSPITAL ADMINISTRATION PROBLEMS.** Three credit hours.
238. **WORKSHOP: PERSONNEL ADMINISTRATION AND HOSPITAL PROBLEMS.** Six credit hours.
239. **HOSPITAL RESIDENCY.** Ten credit hours.

Economics

The staff and the courses for the B.S.B.A. (Economics) are included with those for the A.B., B.S. (Economics) in the College of Arts and Sciences.

Finance (Fi)

Staff: DR. HARRIMAN, *chairman*; MR. FATORA, MR. ROTHWELL, DR. WING.

Assisted by: MR. GARTNER, MR. MUETHING, MR. SETTLE-MAYER.

Upper Division Courses

150. **MONEY AND BANKING.** Three credit hours. Structure and operation of the present money and banking system; theory and history of money; credit and commercial banking; international financial relationships; Federal Reserve System. Prerequisites: Ec 33, 34. (Ec 150)
153. **FINANCIAL INSTITUTIONS.** Three credit hours. A survey of all financial institutions including banking and monetary institutions, business finance, financial intermediaries, saving and consumer finance, and public finance and monetary policy.
154. **STOCK MARKETS.** Three credit hours. A study of securities, the method and manner of their exchange, the functions of securities markets, and the factors promoting changes in securities' prices.
155. **INVESTMENTS.** Three credit hours. Survey of the economic bases of investment practice; techniques of security analysis and portfolio management. Prerequisites: Ec 33, 34.
156. **PUBLIC FINANCE AND TAXATION.** Three credit hours. Analysis of the various forms of taxation; shifting and incidence of taxation; public borrowing; non-tax revenues; public expenditures; the effects of government revenue and expenditures on our economy. (Po 156)
159. **INTERNATIONAL MONETARY POLICY.** Three credit hours. A discussion of practices used in financing foreign trade and other international transactions and the theory and problems of international finance.
160. **BUSINESS FINANCE.** Three credit hours. The various types of American enterprises with special emphasis on the corporation—its organization, management, financing and budgeting.

161. PROBLEMS OF FINANCIAL MANAGEMENT. Three credit hours.
162. INSURANCE. Three credit hours. A combined study of the principles and practices of life and property insurance designed to bring together principles and practices of insurance and the ways in which it may be employed in the interest of personal, family, and business welfare.
163. REAL ESTATE PRINCIPLES AND FINANCE. Three credit hours.
166. ANALYSIS OF FINANCIAL STATEMENTS. Three credit hours. A study of the significance, development and technique of financial statement analyses of business enterprises. Prerequisite: Ac 52.
168. SEMINAR IN FINANCE. Three credit hours.
169. RESEARCH IN FINANCE. Three credit hours. A directed study in a selected field of finance by advanced majors in finance. Projects must have the approval of the chairman of the Department of Finance.
195. CASES AND PROBLEMS IN FINANCE. Three credit hours.
197. TUTORIAL COURSE. Two or three credit hours.
Approved Electives: Ec 135, 148; Ac 151, 152, 157, 158.

Management and Industrial Relations

Staff: DR. HAYES, *chairman*; DR. BRYAN, DR. DONNELLY, MR. KLEKAMP, MR. J. MARTIN, MR. THIERAUF.

Assisted by: MR. CENTNER, MR. FOGG, MR. GROSSE, MR. KLEE, MR. MCDAVID, DR. QUATMAN, DR. SCHULTZ, MR. SHAW.

Management (Mg)

Lower Division Course

90. PRINCIPLES OF MANAGEMENT. Three credit hours. This course is designed to prepare students in the fundamental process which is applicable to all forms of business organization. Emphasis is placed on those organizational and managerial concepts considered essential for business decision making. Prerequisite: Ec 33, 34.

Upper Division Courses

102. WAGE AND SALARY ADMINISTRATION. Three credit hours. This course describes job-evaluation principles and analyses

the major methods employed for the administration of wages and salaries. Attention is given to job descriptions, financial incentive plans, wage and salary studies, and the important problems of wage and salary administration. Prerequisite: Mg 90.

103. PRODUCTION MANAGEMENT. Three credit hours. Production management is the process by which resources are allocated within the firm for the creation of goods and services. This course will be concerned with the decision making related to such resource allocation and will provide students with analytical tools to optimize the results of factor allocation. Prerequisite: Mg 90.
104. MANAGERIAL METHODS ANALYSIS. Three credit hours. To provide the student with some important managerial techniques available for optimum effectiveness from the methods and procedures used in the business organization. Areas to be considered are process charting, work and time measurement, performance rating, work sampling, and paperwork procedures. Prerequisite: Mg 190.
105. MANAGERIAL POLICY FORMULATION. Three credit hours. A case course designed to reinforce the student's knowledge of the mechanics of the management process and to acquaint him with the development of business policies through the study and resolution of actual management situations.
106. PRODUCTION CONTROL. Three credit hours. A functional approach to the study of production control is presented with major emphasis on the industrial organization. Cases and problems in the areas of forecasting, invention, control, routing, scheduling, dispatching, and expediting are analyzed. Prerequisite: Mg 90.
108. RESEARCH IN MANAGEMENT. Three credit hours. Application of research methods to selected managerial problems is attempted. Emphasis is placed on acquiring familiarity with the sources of information of value to the business manager and on the interpretation and presentation of research results. Prerequisite: Mg 90.
109. SYSTEMS, METHODS, AND PROCEDURES. Three credit hours. Cases and problems are utilized. Prerequisite: Mg 90.
110. MANAGERIAL ASPECTS OF DATA PROCESSING. Three credit hours. The objective of this course is to provide an understanding of electronic data processing systems in business and their effect on management organization and control.

The general structure and logic of electronic computers are explained, along with "common language" and punch-card equipment. The phases of planning for and evaluating the feasibility of EDP systems are also covered.

111. **INTRODUCTION TO QUANTITATIVE ANALYSIS FOR BUSINESS.** Three credit hours. Mathematical concepts and techniques applied to business and economics. Topics include linear programming, flow diagrams, maxima and minima of functions, game theory, matrices, and other mathematical concepts relevant to management of economic enterprises.
112. **CONTEMPORARY MANAGEMENT PROBLEMS.** Three credit hours. An examination of several important problems in the area of administrative management. Specific problems discussed vary from one semester to another. Examples of subjects to be discussed: managerial authority, business ethics, management and society, patterns of management, philosophy of management. Prerequisite: Mg 90.
115. **PERSONNEL ADMINISTRATION.** Three credit hours. A study of principles and practices in the administration of human relations in the industrial and commercial world. Emphasis is placed upon the use of scientific techniques and devices in the development of a well-rounded personnel program. (IR 115)
130. **LABOR ECONOMICS.** Three credit hours. A survey of organized labor and labor law; examination of wage determinants and wage theory; examination of causes and remedies of unemployment. (Ec 130)
195. **CASES AND PROBLEMS IN MANAGEMENT.** Three credit hours.
197. **TUTORIAL COURSE.** Two or three credit hours. Content to be determined according to the needs of the student.

Approved Electives: Ac 155; IR 128, 195; and others upon consultation with, and approval of, the Department.

Industrial Relations (IR)

Upper Division Courses

115. **PERSONNEL ADMINISTRATION.** Three credit hours. A study of principles and practices in the administration of human relations in the industrial and commercial world. Emphasis is placed upon the use of scientific techniques and devices in the development of a well-rounded personnel program. (Mg 115)

116. **LABOR RELATIONS.** Three credit hours. A study of issues and problems involved in union-management relations; an evaluation of collective bargaining as a method for resolving labor disputes in our economic system; case studies of labor disputes. (Ec 116)
119. **HISTORY OF THE LABOR MOVEMENT.** Three credit hours. A study of workers' movements in the U. S.; comparison of characteristics of different organizations from the Colonial period to the present. (Ec 119)
120. **LABOR LEGISLATION.** Three credit hours. A study of the origins and development of labor law in the U. S.; emphasis on laws treating injunctions, worker combinations, labor-management relations, internal union affairs, and working conditions. (Ec 120)
122. **CURRENT LABOR PROBLEMS.** Three credit hours. A study of various normative and analytical frameworks for examining labor problems; application of these frameworks to several important problems facing the labor movement today. Prerequisite: IR 130. (Ec 122)
123. **RESEARCH IN INDUSTRIAL RELATIONS.** Three credit hours. A survey of the tools essential for sound research in problems in industrial relations. Specific current problems are studied to insure competence in the use of research tools. Prerequisite: IR 130.
125. **INTERNATIONAL LABOR PROBLEMS.** Three credit hours. A study of international labor bodies with which the American labor movement is affiliated. Comparative study of various labor movements and of the approaches of different labor movements to similar problems. Prerequisite: IR 130.
128. **INDUSTRIAL PSYCHOLOGY.** Two or three credit hours. A review of the principles of sound psychological procedure as applied to personnel in industry and commerce. Prerequisite: Ps 31. (Ps 128)
130. **LABOR ECONOMICS.** Three credit hours. A survey of organized labor and labor law; examination of wage determinants and wage theory; examination of causes and remedies of unemployment. (Ec 130, Mg 130)
131. **PSYCHOLOGICAL AND ACHIEVEMENT TESTS.** Three credit hours. A survey of commonly used group tests; testing procedures, and rationale underlying these tests; tests of intelligence, aptitude, achievement, interest, and personality critically

examined; procedures described for selecting and evaluating specific group tests in these areas. Two lectures and two laboratory periods per week. (Ed 131, Ps 131)

195. CASES AND PROBLEMS IN PERSONNEL RELATIONS. Three credit hours.

197. TUTORIAL COURSE. Two or three credit hours. Content to be determined according to the needs of the student.

Approved Electives: Upon consultation with, and approval of, the Department.

Marketing (Mk)

Staff: MR. McDAVID, *acting chairman*; MR. BRANNEN, MR. GROSSE, MR. RODERICK.

Assisted by: MR. FARRELL, MR. FOGG, MR. McDONOUGH, MR. McMULLIN, MR. O'CONNELL, MR. RASMUSSEN, MR. VOLCK, MR. ZIMMER.

Lower Division Course

70. PRINCIPLES OF MARKETING. Three credit hours. This course contains an overview of the distribution system of the United States economy from both the institutional and functional point of view. A survey and an evaluation of current institutions for the distribution of industrial and consumer goods (wholesaling and retailing) serve as the background for the study of the functions in distribution such as selling (advertising, personal sales, and sales promotion), buying, storage, transportation, and marketing information. Marketing policies are discussed within the existing governmental framework.

Upper Division Courses

171. MARKETING POLICY. Three credit hours. This course increases the problem-solving ability of students by requiring their continuous participation in a series of case-studies. These deal with marketing strategy and policy, and problems will be examined, analyzed, and discussed in depth. The effects of the proposed marketing actions will be projected from the viewpoint of management.

172. MARKETING RESEARCH. Three credit hours. The place of marketing research as a major management tool will be examined. Applications of marketing research will be discussed: determination of the needs of consumers and of

marketing intermediaries; measurement of potential markets; sales forecasting; effectiveness of advertising; use of motivation research. Special attention will be given to test-marketing and the use of panels.

174. INDUSTRIAL MARKETING. Three credit hours. The special problems of marketing industrial products. Marketing planning as a management function. Management of the marketing channels. Pricing of industrial products. Getting the industrial products sold. Efficient physical distribution of industrial products. Customer services.

175. MARKETING MANAGEMENT. Three credit hours. The need for marketing planning. Changes in the economy over a period of time. The need for new products to replace existing products and for new marketing techniques. The management of personal selling. The co-ordination of advertising with all other aspects of marketing. The development of policy toward changing the items comprising the present product-lines.

177. INTERNATIONAL MARKETING. Three credit hours. Conditions peculiar to international distribution of United States goods and services and the effects of this distribution on the national welfare are the bases for the study of international marketing organizations and methods. Technical and financial complexities, such as pricing, foreign collections, foreign exchange, and international banking facilities, are explained.

178. CREDITS AND COLLECTIONS. Three credit hours. Nature, instruments, and place of credit in the economy. Management of consumer, mercantile, and bank credit. Analysis of credit risk. Management of collection and credit control.

179. PRINCIPLES OF PURCHASING. Three credit hours. The purpose of this course is to give the student a thorough grounding in the principles and practices of purchasing. Emphasis is placed on the techniques involved in making decisions on the right quality and quantity at the right prices, price policies, sources of supplies, and standards of performance.

180. PHYSICAL DISTRIBUTION ANALYSIS. Three credit hours. The logistics problems of the firm will be examined as a part of the overall distribution process. Emphasis will be on an evaluation of the physical movement functions of marketing, such as transportation, storage, and optimum allocation of products to various geographical locations. The quantitative approach is stressed and inventory control, product flow, and plant location factors are all analyzed.

181. **PRINCIPLES OF RETAILING.** Three credit hours. The purpose of the course is to orient the marketing student in the basics of retailing, from the point of view of the current ferment in retailing. Among the traditional functional areas of study are retailing careers; store location, design, and layout; retail organization; buying and merchandising; customer services; and retail control.
183. **PRINCIPLES OF ADVERTISING I.** Two or three credit hours. A study of the institutions peculiar to American advertising is followed by the study of the planning of the advertising campaign, the mechanics of advertising, and media strategy. Stress is also placed on the economic and social effects of advertising along with society's reactions to advertising.
184. **PRINCIPLES OF ADVERTISING II.** Two or three credit hours. A continuation of Mk 183.
186. **SALES MANAGEMENT.** Three credit hours. The role of personal selling in marketing. The selection, training, and assignment of the sales force. Motivation, compensation, and promotion of it. Advantages and disadvantages of the commission plan of compensation. Continuous training of the sales force.
187. **SALESMANSHIP I.** Two or three credit hours. The stress is on the understanding of selling—analyzing the dynamics of a sale. It offers the student an opportunity to understand the function of persuasive leadership as it relates to commerce and to other business relationships. The techniques of persuasive leadership as it applies to the buying of goods and services are studied and practiced.
188. **SALESMANSHIP II.** Two or three credit hours. A continuation of Mk 187.
195. **CASES AND PROBLEMS IN MARKETING.** Three credit hours.
197. **TUTORIAL COURSE.** Two or three credit hours.

Approved Elective: Ec 145.

Graduate School

Throughout the academic year as well as the summer sessions, graduate courses are offered in business administration, chemistry, classical languages, education, English, history, political science, mathematics, philosophy, physics, and psychology. The Graduate School is open to men and women.

The Graduate Council encourages the registration of both *special students* and *degree students*. *Special students*, with the approval of the head of the department concerned, register for individual courses which they may pursue with profit, without regard to degree requirements. *Degree students* register with the express intention of following a program leading to a graduate degree.

THE MASTER OF ARTS

Xavier University offers programs leading to the degree of Master of Arts in classics, English, history, political science, philosophy (summer only), and psychology.

In the Master of Arts programs great emphasis is laid upon cultural and liberal pursuits. Yet, since Xavier's undergraduate program—the norm of admission for graduate students—calls for a broad background of general education, philosophy, and Christian Culture, the final goal of the Master of Arts programs is that the student may come to possess a specialized knowledge of his chosen field, and an intelligent appreciation of its place in the wide panorama of human thought.

The Master of Arts is awarded to the candidate who has demonstrated a capacity for further study or teaching by satisfactorily completing a program of graduate work designed to give him these characteristics:

1. An understanding of the relations of his subject to allied subjects and to the synthesis of Christian Culture, which is the basis of Western civilization.
2. A comprehensive knowledge of the broad field of learning in which the degree is conferred.
3. A specialized knowledge of a portion of that field.
4. Proven ability to do research in the special field of study.

General Requirements

In accordance with the above objectives the general requirements for the degrees are respectively:

1. Completion of such undergraduate prerequisites as will give assurance of the candidate's general educational background. Satisfactory completion of the Miller Analogies Test.
2. A reading knowledge of a foreign language.
3. Completion of a program consisting of at least twenty-four hours of integrated classroom study within the student's chosen field.
4. Production of an acceptable thesis of a research character. To safeguard the cultural objectives it should be kept in mind that the result of research can be synthesis as well as analysis. For the thesis six credit hours (completing the required thirty hours) will be awarded on the recommendation of the thesis adviser. Three typed copies of the thesis are to be submitted after it is formally approved. Students in the Department of English may either write the thesis or substitute six additional hours of class work and a substantial research essay.
5. Completion of a final oral, comprehensive examination.

THE MASTER OF ARTS

- CLASSICS
- HISTORY
- PHILOSOPHY

Within the general requirements for the Master of Arts, graduate departments administering programs may add specific regulations. Candidates for these degrees are urged to maintain close relationship with the chairmen of their particular departments.

THE MASTER OF ARTS—ENGLISH

Students who envision the Master of Arts in English as a terminal degree are advised to elect a program consisting of thirty credit hours of class work and the writing of a seminar essay. Half of the thirty hours must be in courses numbered 200 or higher. The seminar essay must also be written in a course numbered 200 or higher under the direction of the instructor, and, when completed, must be approved by him. Students electing this program must pass an examination in a modern foreign language early in their graduate work. A candidate who concentrates on medieval literature may, if he chooses, substitute Latin. Students must also pass a written comprehensive examination in English and American literature, which should ordinarily not be taken until all class work has been completed. They may select any six of these areas for examination: Medieval Literature, The Renaissance, Shakespeare, The Early Seventeenth Century, Milton, Neo-classicism, Romanticism, Victorian Literature,

American Literature to 1900, Modern Literature, The English and American Novel, and The English and American Drama.

Those preparing for further studies in English, especially toward the doctorate, are advised to elect a program consisting of twenty-four hours of class work and the writing of a dissertation. One half of the twenty-four hours must be in courses numbered 200 or higher. The dissertation, for which six credit hours are awarded, must be written under the guidance of a member of the faculty and must demonstrate the ability to do scholarly research of high quality. In addition, the candidate must pass the written comprehensive examination in English and American literature mentioned above, and an examination in a modern foreign language early in his graduate work. The student in this program must also pass an oral examination on his dissertation and his course work.

Admission Requirements

1. Bachelor's degree from an accredited college or university.
2. A 2.5 overall undergraduate average and a 3.0 average in all English courses. This average is computed by assigning quality credits of 4 for each credit hour of A.
3. A minimum of thirty undergraduate credit hours in English which should include the survey of English literature from the beginning to the present day; the survey of American literature; at least one course in Shakespeare. A course in aesthetics and criticism is highly recommended. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up these necessary hours.

Procedures of Admission

Full-time students must complete the following procedures before registration:

1. Submit to the Graduate Office the completed application form for admission to the Graduate School.
2. Submit transcript of previous college work.
3. Submit to the Graduate Office his score on the Graduate Record Examination in Literature.
4. Arrange with the Chairman, Department of English, for a personal interview and complete the departmental application form.

Part-time students may be admitted for their first semester of work prior to their personal interview. All admission procedures, however, must have been completed before the second registration.

THE MASTER OF ARTS—PSYCHOLOGY

The degree of Master of Arts in psychology is designed to prepare students for continuing their graduate studies to the doctorate level and to prepare students for employment in the areas of clinical, counseling, and industrial psychology.

Accordingly this degree is awarded to the candidate who has demonstrated a capacity for qualitative performance by completing satisfactorily a graduate program designed to give him these characteristics:

1. Broad advanced knowledge of the general field of psychology.
2. Either further breadth of knowledge (for those planning to continue immediately in a doctoral program) or specific knowledge of one major area of psychology in which he plans professional activity.
3. Proven ability to do research in psychology.

Program

To insure comprehensiveness, all candidates must include in their program each of the following courses designed in their whole to provide integrated coverage of the graduate field of psychology. These courses are:

- Ps 177, THEORIES OF PERSONALITY I AND II. Four credit hours, two each semester. The study and understanding of human personality. Concepts utilized in personality dynamics. Anthropological analysis of man, his basic emotions, and their interrelationships. Evaluation of current personality theories.
- Ps 201. CONTEMPORARY THEORY IN PSYCHOLOGY. Three credit hours. An evaluative review of the concepts which are basic to current theory, research, and practice in psychology and its major divisions.
- Ps 202. ADVANCED EXPERIMENTAL PSYCHOLOGY. Three credit hours. Intensive survey of experimental procedures and findings; utilization of laboratory equipment; introduction to individual laboratory research.
- Ps 214. ADVANCED STATISTICS. Three credit hours. Prerequisite: Ps 138 or equivalent. Review of elementary correlation. Serial correlation and other correlation methods. Use of multiple regression and discriminant analysis with psychological data. Simple analysis of variance. Basic statistical considerations in dealing with small samples.

- Ps 249. SEMINAR: ARISTOTLE'S DE ANIMA. Three credit hours. A study of historical development of basic psychological concepts from Aristotle to the present. Interrelations between science, psychology, and philosophy.

- Ps 283. PROFESSIONAL PROBLEMS IN PSYCHOLOGY. One credit hour. Basic principles of ethics and their application to psychological theory, research, and practice. Case studies.

To insure the attainment of his particular objective in graduate study in psychology, the student must include a concentration in one of the following *areas of concentration*:

General-Experimental Psychology

(Preparation, Ph.D. programs).

A minimum of seven credit hours selected from the following courses: Biological Basis of Animal Behavior, Learning and Motivation, Design of Experiments, Research Problems in Psychology, Communication, Social Psychology, Differential Psychology, Psychological and Achievement Tests.

Clinical Psychology

A minimum of thirteen credit hours selected from the following courses: Learning and Motivation, Psychopathology, Dynamic Psychology, Individual Tests of Intelligence, Counseling Principles and Techniques, Projective Techniques I and II, Research Problems in Psychology, Communication, Counseling and Psychotherapy, Remedial Reading. Practicum in Clinical Psychology is required.

Counseling Psychology

A minimum of thirteen credit hours selected from the following courses: Learning and Motivation, Developmental Psychology, Dynamic Psychology, Vocational and Educational Guidance, Psychological and Achievement Tests, Counseling Principles and Techniques, Individual Tests of Intelligence, Communication, Remedial Reading. Practicum in Counseling is required.

Industrial Psychology

A minimum of thirteen credit hours selected from the following courses: Occupational Information and Job Analysis, Marketing Research, Personnel Selection and Evaluation Techniques, Communication, Design of Experiments, Dynamic Psychology, Learning and Motivation. Practicum in Industrial Psychology is required.

As a climax to his program, each student must register for Ps 299, Master's thesis, six credit hours. He will prepare an acceptable thesis, which will be defended in his final oral examination.

Quantitative Requirements

Depending on the student's concentration, a minimum of thirty or thirty-six graduate hours is required for the degree of Master of Arts in psychology. These shall ordinarily be distributed as follows:

1. Seventeen credit hours in the core courses.
2. Seven or thirteen hours in the area of concentration.
3. Six hours awarded for Master's thesis.

Qualitative Requirements

The degree of Master of Arts in psychology will be awarded only to candidates *who have demonstrated a reading knowledge of a foreign language* and, in a final oral examination, have both successfully defended their thesis and successfully demonstrated their knowledge of the general field of psychology.

Admission Requirements

1. Bachelor's degree from an accredited college or university.
2. A 2.5 overall undergraduate average and a 3.0 average in all psychology courses. This average is computed by assigning quality credits of 4 for each credit hour of A.
3. Satisfactory performance on the Miller Analogies Test.
4. A minimum of eighteen undergraduate credit hours in psychology which should include experimental psychology (with laboratory), introductory statistics, psychology of personality, and/or abnormal psychology. Also courses in biological science and college mathematics are recommended as a preparation for graduate studies. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up the necessary hours.
5. Personality and character traits which are in agreement with ethical standards of psychology.

Procedures of Admission

Full-time students must complete the following procedures in advance of registration:

1. Submit to the Graduate Office the completed application form for admission to the Graduate School and special application form for admission to the department of psychology.
2. Submit transcript of previous college work.
3. Submit to the Graduate Office report of M.A.T. score or arrange with the Department of Psychology for examination.

4. Arrange with the Psychology Department for a personal interview. (It may be possible that the interviewing of students from considerable distance be delegated to a local psychologist by special arrangement.)
5. The Dean of the Graduate School will notify the applicant of official acceptance.

Part-time students may be admitted as special students for their first semester of work prior to M.A.T. results and personal interview. All admission procedures, however, must have been completed prior to their second registration.

THE MASTER OF SCIENCE—CHEMISTRY

This degree in chemistry is designed to prepare students for continuing their graduate studies to the doctoral level, or for employment in the more specialized areas of chemical industry. Courses may also be taken for self-improvement on a non-degree basis by those so inclined.

The program is constructed to offer the student:

1. A broad advanced knowledge of the general field of chemistry;
2. Further training in the techniques of original chemical investigation.

Prerequisites

In all cases, the prerequisite for enrollment in the Graduate School is the possession of the baccalaureate degree. For entrance into the graduate program in chemistry, the applicant should have had undergraduate training in chemistry substantially equivalent to a Xavier undergraduate major. This normally consists of general chemistry (nine credit hours, and includes an introduction to qualitative inorganic analysis), quantitative analysis (four credit hours), organic chemistry (eight credit hours), chemical literature (one credit hour), physical chemistry (seven credit hours), qualitative organic analysis (three credit hours), intermediate organic (two credit hours), instrumental analysis (four credit hours), intermediate inorganic (three credit hours), and senior thesis (two credit hours).

Undergraduate prerequisites also include mathematics through calculus and a year of physics (eight credit hours). A student seriously deficient in these prerequisites will be required to make up the deficiency prior to, or concurrent with, his graduate studies.

Program

To insure comprehensiveness, all candidates must include in their program each of the following four basic courses designed to provide general coverage of the broad field of chemistry.

- Ch 207, **ADVANCED ORGANIC CHEMISTRY.** Four credit hours. A review and extension of fundamental organic chemistry in the light of modern structural theory. Special topics not ordinarily included in the elementary approach are included.
- Ch 215, **ADVANCED QUANTITATIVE INORGANIC AND INSTRUMENTAL ANALYSIS.** Four credit hours. A comprehensive and advanced study of the theory and practice of analytical chemistry, including modern instrumental methods of analysis.
- Ch 225, **ADVANCED PHYSICAL CHEMISTRY.** Four credit hours. The more important phases of theoretical and physical chemistry rigidly developed from the viewpoint of thermodynamics.
- Ch 253, **ADVANCED INORGANIC CHEMISTRY.** Four credit hours. A systematic presentation of modern developments in inorganic chemistry. Theoretical aspects are combined with descriptive material.

In addition to the above basic courses, the graduate student selects from a variety of minor courses, including some in the 100 level, enough additional offerings to total at least eight credit hours. In his selection, the student is guided by the department chairman, or, after selection of his research topic, by his research adviser. Among those courses that are periodically offered are the following:

- Ch 160. **BIOCHEMISTRY.** Three credit hours. An introductory course.
- Ch 212. **HETEROCYCLIC ORGANIC CHEMISTRY.** Two credit hours.
- Ch 230. **PHYSICAL-CHEMICAL MEASUREMENTS.** Two credit hours. A laboratory course in the application of physical measurement to chemical research.
- Ch 235. **PHYSICAL ORGANIC CHEMISTRY.** Two credit hours. A study of mechanisms and rates of organic reactions.
- Ch 245. **THE CHEMICAL BOND.** Two credit hours. An introduction to the quantum theory of valence.
- Ch 248. **CHEMICAL SPECTROSCOPY.** Two credit hours.
- Ch 260. **ADVANCED BIOCHEMISTRY.** Two credit hours.
- Ch 263. **MEDICINAL CHEMISTRY.** Two credit hours.
- Ch 280. **SPECIAL TOPICS.** Two credit hours each semester. The nature of these courses is indicated by descriptive subtitles, such as **POLYMER CHEMISTRY, ORGANO-METALLICS,** and so on.

Quantitative Requirements

A minimum of thirty hours is required for the degree of Master of Science in chemistry. These shall ordinarily be distributed as follows:

1. Sixteen credit hours in the four basic graduate chemistry courses: advanced analytical, advanced organic, advanced inorganic, and advanced physical chemistry. Each of these carries four hours of credit and is offered on a rotating basis; that is, one is taught each semester in the evening, and one in the first summer session in the day time.
2. At least eight hours of additional classroom credit in other chemistry courses available to the graduate student. With permission of the chairman of the department, some 100 level credits may be included.
3. Six hours of credit are obtained through the satisfactory completion of a Master's thesis problem, submission of a written thesis, and the passing of an oral examination on the contents of the thesis.

The satisfactory completion of a written examination in a scientific modern language (chemical German, French, or Russian) is also required.

Registration Procedure

Registration for graduate chemistry students is through the office of the Graduate School. All degree students must present a schedule of courses to be taken, approved either by the chairman of the chemistry department or, in the case of students assigned a thesis adviser, a schedule approved by him.

THE MASTER OF SCIENCE—MATHEMATICS

The program of studies leading to a Master of Science in mathematics is designed so that a full-time graduate student may earn the Master's degree in one year, while an employed part-time graduate student may earn the degree in three years or more by taking one or two courses a semester, depending upon the time available for attendance and study.

Courses are offered in the evenings during the fall and spring semesters and in the mornings in the first session of Summer School.

For those who cannot attend during the academic year, requirements for the degree may be completed during summer sessions only. Courses will be offered in a five-summer cycle, and will cover material useful in teaching mathematics in high school or college.

Basic courses, such as Functions of a Real Variable, Complex Analysis, Modern Algebra, and Topology, will be offered in the

evenings in a two-year cycle. Mathematical Statistics, Numerical Analysis, and other courses will be offered according to the demand.

Prerequisites

Students electing Plan A must have at least twenty-six undergraduate credit hours in mathematics beyond Calculus. Students electing Plan B must have at least Advanced Calculus and Differential Equations.

If a graduate student does not have twelve undergraduate credits hours in philosophy, he must take the three credit-hour course, Pl 150: Philosophical Thinking, before receiving his Master's degree. This course may not be included in the graduate hours required for the Master's degree.

Requirements

Students may elect to fulfill requirements for the degree of Master of Science in mathematics under either Plan A or Plan B. Both plans require thirty semester hours of graduate credit.

Plan A: Twenty-four semester hours of class work, six semester hours awarded upon completion of an acceptable thesis, demonstration of a reading knowledge of a foreign language, and a final oral comprehensive examination.

Plan B: Thirty semester hours of class work, a research paper, and a final written comprehensive examination.

When a student makes his application for candidacy, after completing six graduate credit hours at Xavier, he must elect either Plan A or Plan B, and submit a program of courses which he will offer for the degree. The program must contain Mt 250, 251, 252, and 253. If the student has not had Mt 144, 145, 156, and 181 or the equivalent, he must include these in his program for the degree. One half of the courses offered for his degree must be at the 200 level. After being accepted for candidacy, the student will be assigned an advisor. Any changes in his program must be approved by his advisor.

Students may be granted up to six hours of advanced standing for graduate credit completed *prior* to registering at Xavier, providing the course work was not in extension.

The requirements for the degree must be fulfilled within five calendar years after one has earned six graduate credit hours at Xavier.

Comprehensive Examination

This examination will be given in the spring semester for students taking courses during the academic year, and in July for students taking courses only in the summer.

One will be questioned in this examination about the four basic fields: Functions of a Real Variable, Complex Analysis, Modern Algebra, and Topology.

If a student elects Plan A:

- He may not change from Plan A to Plan B after having completed eighteen hours of course work.
- He should select an area for his thesis and, with his advisor, a particular topic at least six months before he expects to graduate.
- He must have passed his foreign language examination before taking the comprehensive examination.
- His thesis must be completed and three copies submitted six weeks before the date of graduation.
- He must pass an oral comprehensive examination.

If a student elects Plan B:

- He should consult his advisor about a topic for his research paper in sufficient time so that two approved copies are submitted before his comprehensive examination.
- He must pass a written comprehensive examination.

One should consult a member of the mathematics staff before registering for courses.

THE MASTER OF SCIENCE—PHYSICS

The graduate program in physics is designed to facilitate creative mathematical exploration by student and teacher together into the way of the natural working of the world. Courses and research are primarily selected to provide an integrated master's program in theoretical physics with principal emphasis on classical analytical mechanics, relativistic electrodynamics, and quantum theory.

Research in the program reflects this emphasis on theory, the experimental equipment of the Physics Department being selected primarily for its high pedagogical utility. Experimental research work may be included in the graduate program in those instances where available equipment permits examination of phenomena having crucial theoretical significance. Topics in theoretical physics currently under investigation include: significance of electromagnetic potentials, extension of quantum behavior, general problems of recurring phenomena, dimensionality as physical variable in the hierarchy of interaction geometries, collective aspects of metastability, and the role of measurement in the foundations of quantum physics.

Full-time students may complete requirements for the Master of Science degree in one calendar year. Course offerings are scheduled evenings and Saturdays to allow those engaged in teaching, industrial, or defense work to complete degree requirements on a part-time basis, taking one or two courses a semester.

Undergraduate Prerequisites

Prospective graduate students in physics must ordinarily submit evidence of a baccalaureate degree and a satisfactory performance record in undergraduate physics and mathematics courses comparable with those taken by a physics major at Xavier University. Personal interviews, letters of recommendation, scores on the Miller Analogies Test and the Graduate Record Examination Aptitude and Achievement Tests are given due consideration. Upon recommendation of the student's adviser and approval of the Dean of the Graduate School, up to six hours' credit may be granted for graduate work satisfactorily completed at other institutions.

The chairman of the Physics Department, or an adviser designated by him, should be consulted by each full-time student before registration and by each part-time student before completing his first six hours of work. The student should secure a precise statement concerning any undergraduate deficiencies at that time. His schedule for each subsequent registration must be approved in advance in writing by his adviser.

Requirements

Students may elect to fulfill requirements for the Master of Science in Physics under Plan A or Plan B. Both require thirty semester hours of graduate credit.

Plan A: Twenty-four semester hours of class work, six semester hours awarded upon completion of an acceptable thesis, demonstration of a reading knowledge of a foreign language, and a final oral comprehensive examination.

Plan B: Thirty semester hours of class work, a research paper, and a final written comprehensive examination.

Program of Studies

The distinctive nature of the Xavier graduate program in theoretical physics requires that all students elect the following three principal courses (15 graduate credit hours):

Ph 210. CLASSICAL ANALYTICAL MECHANICS. Three credit hours. Mechanical principles and mathematical methods useful

in relativity quantum mechanics including the variational principle, rigid body motion, elasticity, Hamilton's equations and cononical transformations, Hamilton-Jacobi theory, and an introduction to relativistic mechanics.

Ph 220, RELATIVISTIC ELECTRODYNAMICS. Six credit hours. Relativistic electrodynamics as an example of a theory. The nature of a theory, general principles underlying both Newtonian mechanics and a special theory of relativity. The assumption of superposition, the full theory of Electrodynamics, and the Maxwell-Lorentz equations. Difficulties resulting from the fact of existence of electrons.

Ph 230, QUANTUM MECHANICS. Six credit hours. Some fundamental experiments of atomic physics. De Broglie waves and properties of wave packets. Uncertainty relation. Schroedinger's equation applied to the hydrogen atom and the harmonic oscillator. Quantum mechanical operations in Hilbert space, matrix formulation of Q.M., perturbation theory, theory of measuring process, angular momentum and spin, Dirac's electron.

In addition to these basic courses the graduate student electing Plan A must present nine additional class hours and six credit hours for his master's thesis; those electing Plan B must present fifteen additional class hours and a research paper. These additional hours, upon approval of the student's adviser, will be selected from other courses in physics as offered or from supporting courses offered by other departments such as Mathematics, Chemistry, or Biology.

THE MASTER OF EDUCATION

The degree of Master of Education, a professional degree, is designed to meet the needs of teachers and school administrators actually engaged in school work. It has one basic aim: stimulating better teaching wherever the influence of the successful candidate may extend, whether it be in an individual classroom, an entire school, or a whole school system.

Accordingly, this degree is awarded to the candidate who has demonstrated a capacity for improving the quality of teaching within the particular sphere of his influence by satisfactorily completing a program of graduate work designed to give him these characteristics:

1. Broad knowledge of the principles and techniques of education in modern society.

2. Specific knowledge of one major area of the field of education.
3. Essential understandings and skills necessary for intelligent consumption of educational research.

General Requirements

Requirements for the degree of Master of Education are specified with certain basic considerations in mind:

1. Sufficient flexibility is necessary to care adequately for the particular needs of the in-service educator who enrolls for the degree.
2. Before students are accepted as candidates for this degree, they must demonstrate a basic knowledge of the general field of education as generally required of undergraduates planning to teach, except those combining M.Ed. and teaching requirements.
3. Graduate programs must be so planned as to insure the student's attaining a comprehensive knowledge of professional theory and practice in the principal areas of the field; a detailed knowledge of at least one major area of specialization—for high school teachers this area may be an appropriate academic field; and capability in the skills and knowledge necessary for intelligent comprehension and use of educational research.

Prerequisites

Students electing graduate work leading to the degree of Master of Education must present undergraduate courses in education totaling at least twelve semester hours, except those combining M.Ed. and teaching requirements.

Program

To insure comprehensiveness in their programs for the degree of Master of Education, all candidates must include in their programs each of four general survey courses designed, in their whole, to provide integrated coverage of the broad field of education. These courses are:

- Ed. 201. Philosophy of Education.
- Ed. 203. Educational Psychology.
- Ed. 205. Educational Administration.
- Ed. 207. Education Research.

To insure their mastery of a particular area of education, all candidates must include in their programs a concentration of at least twelve credit hours in one of the following *areas of concentration*:

Administration

A concentration in Administration must include Ed 241: Administration of the Elementary School, or Ed 242: Administration of the Secondary School, Ed 243: Supervision of Instruction, and either Ed 211: Elementary Curriculum or Ed 221: Secondary Curriculum. To complete at least twelve hours of concentration, students may select such courses as School Public Relations, School Law, School Finance, School Buildings, Tests, Guidance, or Counselling (Ed 131, 232, 233).

The Xavier M.Ed. degree with a concentration in administration satisfies Ohio requirements for provisional certificates as elementary principal; as secondary principal if Ed 232: Educational and Vocational Guidance is included; as supervisor if both Ed 211: Elementary Curriculum and Ed 221: Secondary Curriculum are included; and as executive head if both courses in curriculum and two of these three courses are included: Ed 275: School Law, Ed 276: School Finance, and Ed 277: School Buildings.

For the Xavier sixty hour program for superintendent and for permanent administrative certification in Ohio, request requirements from the Graduate School office.

Guidance

A concentration in Guidance is designed to prepare the student for counselling or school psychologist work. Proper selection of courses will also help the student prepare for personnel work in industry or in the armed services. Students must include Ed 131: Psychological and Achievement Testing and Ed 233: Counselling Principles and Techniques. To complete twelve hours of concentration, one may choose from any of the psychology courses (abnormal, dynamic, social, adolescent, etc.), Individual Tests of Intelligence, Remedial Reading Techniques, Laboratory in Guidance, etc.

For the Xavier sixty hour program for superintendent and for permanent administrative certification in Ohio, request requirements from the Graduate School office.

Elementary and Secondary Education

Concentrations in these areas may include courses in current problems, administration, and curriculum at the particular level. Work in remedial reading, child or adolescent psychology, basic skills, and audio-visual aids may also be selected as appropriate. Students whose interest lies in teaching at the secondary level should

consider carefully whether their needs would be better served by work in a subject matter area rather than in the more professional courses in secondary education.

Physical Education

A concentration in the general area of physical education, health education, and recreation is available on Saturdays and in summer sessions. Forming this concentration are such three-hour courses as Ed 290: Administration of School Athletics, Ed 291: Leadership in Outdoor Recreation, Ed 292: Administration of Intramural Athletics, Ed 293: Facilities for Physical Education, Health, and Recreation, and Ed 294: Seminar: Coaching.

The Emotionally Disturbed Child

This concentration must include Ed 118: Introduction to the Emotionally Disturbed Child, Ed 119: Guiding the Emotionally Disturbed Child, Ed 152: Psychology of Delinquency, and Ed 220: Clinical Studies: Emotionally Disturbed Child; and at least two other courses selected from Abnormal Psychology, Mental Hygiene, Social Psychology, Differential Psychology, Psychopathology, and Child or Adolescent Psychology.

Montessori Education

This concentration will include Ed 252: Montessori Education: Psychological Bases; Ed 253: Montessori Education: Historical, Theoretical, and Developmental Aspects; Ed 254: Montessori Methods and Materials: Sensory Level; and Ed 255: Montessori Methods and Materials: Abstract Level. Also available are Ed 257 and 258: Montessori Education: Internship I and II. All are three hour courses. A folder on this concentration is available upon request.

Business, Chemistry, English, History, Political Science, Classics, Philosophy, Mathematics

Concentrations in the subjects listed above, in which the University offers Masters' degrees, are always available. For the prospective college teacher, the Master's degree in a subject area is usually necessary. For the teacher at other levels, especially at the high school level, there is much to recommend the Master of Education with a concentration in a subject area. The teacher deepens his knowledge of the broad field of professional education through the surveys, and may elect up to eighteen hours (or two-thirds of the class requirements) of the Master of Arts, Master of Science, or Master of Business Administration in his subject. He may do this even though he does not meet the subject matter prerequisites for the other degrees. His course selections may be at either the strictly graduate level (200 series) or the advanced undergraduate-graduate level (100 series).

Communication Arts

Students may include such summer courses as Ed 272: School Public Relations, Ed 270: Audio-Visual Aids, Ed 285: Workshop in School Public Relations, En 101: Advanced Writing, En 102: Journalistic Writing, or appropriate speech courses. During the school year courses in radio and television are also available.

Biology (Summers)

For teachers of biology a concentration is offered in the following three hour courses, one of which is offered each summer for those who have had lower division work in biology: Bl 184: Advanced Biology of Man, Bl 185: Advanced Zoology, Bl 186: Advanced Botany, and Bl 187: Advanced Biological Principles. Those interested in this concentration should register for one of the required surveys in education and for the biology course being offered.

Chemistry for High School Teachers

A sequence of eighteen semester hours is required as follows: Ch 201: Organic Chemistry for Teachers, Ch 202: Theoretical Chemistry for Teachers, Ch 203: Inorganic Chemistry for Teachers, and Ch 204: Chemical Research for Teachers. These courses are designed to be taken in order. Ch 201 was offered in the summer of 1962 and will be repeated in the summer of 1965, Ch 202 will be offered in the summer of 1963 and 1966, and Ch 203 and 204 in 1964 and 1967.

Modern Languages

Advanced *upper division* courses in French, German, and Spanish are regularly offered in the Summer Sessions and in the late afternoons during the academic year to allow students to complete a concentration in one of these languages.

Physics

A sequence of four courses especially designed for high school teachers of physics is offered in the Summer Sessions and on Saturdays to provide a concentration for teachers who have had at least one year of college physics.

Theology

Theology is becoming an increasingly popular area of concentration, especially for religious teachers. Each summer Xavier offers at least two courses applicable to this concentration, courses such as The Unity and Trinity of God, Thomistic Foundations of Modern Apologetics, Theology of Grace, Spiritual Exercises of Saint Ignatius, etc.

Students electing graduate courses which they plan to submit in fulfillment of requirements for the degree of Master of Education,

must have their programs approved by the Chairman of the Department of Education in advance of their registration for courses if they are to be assured of the appropriateness of their selection.

Quantitative Requirements

A minimum of thirty hours is required for the degree of Master of Education. These shall be distributed as follows:

1. General surveys in education, twelve credit hours.
2. Concentration, twelve credit hours.
3. Pertinent electives, six credit hours.

Qualitative Requirements

The degree of Master of Education will be awarded only to candidates who have passed an extensive written examination on the general field of education as covered by the four survey courses and the individual's area of concentration.

THE MASTER OF BUSINESS ADMINISTRATION

The degree of Master of Business Administration is a professional degree designed to meet the needs of persons in industry for training which will ready them for increasing executive responsibilities.

Accordingly this degree is awarded to the candidate who has demonstrated capacity for leadership in the field of business by satisfactorily completing a graduate program designed to give him the following characteristics:

1. Broad knowledge of the principles and techniques of business administration.
2. Specific knowledge of one of the major phases of business administration.
3. Essential understandings and skills necessary for intelligent consumption of research in the fields of business.

Prerequisites

Students may be admitted to graduate work in business administration on either of these bases:

1. Undergraduate degree in business administration.
2. Undergraduate non-business degree, plus at least two full years of business experience, and 18 hours of course work in business subjects including accounting, economics, marketing, and statistics.

Undergraduate deficiencies may be removed by completing BA 200a, Basic Accounting (4 credit hours); BA 200b, Basic Economics (4 credit hours); BA 200c, Basic Marketing

(2 credit hours); and BA 200d, Basic Statistics (2 credit hours), or their equivalents, as appropriate. These are special courses open only to graduate students with undergraduate deficiencies.

3. Undergraduate non-business degree with at least 30 hours of business and economics subjects. Deficiencies may be removed by an extended graduate program including BA 200a, b, c, and d (12 graduate hours as shown) and 6 additional hours as advised in individual cases.

Program

To insure comprehensiveness in their programs for the degree of Master of Business Administration, all candidates must include in their programs each of four general survey courses designed in their whole to provide integrated coverage of the broad business field. These courses are:

- BA 201. ECONOMICS OF BUSINESS. Three credit hours.
- BA 202. QUANTITATIVE BUSINESS METHODS. Three credit hours.
- BA 203. MANAGERIAL ACCOUNTING. Three credit hours.
- BA 204. ADMINISTRATIVE OPERATION. Three credit hours.

To insure their mastery of a particular area of business administration, candidates will ordinarily include in their programs a concentration of at least nine credit hours in one of the following *areas of concentration*:

- Accounting* (Advanced Accounting Problems, Industrial Accounting, Taxation, Systems, Auditing Principles, Budgeting Procedures, Controllership, etc.)
- Personnel* (Collective Bargaining, Problems of Labor, Labor Legislation, Labor Economics, Industrial Psychology, Counselling Principles and Techniques, Psychological and Achievement Tests, Abnormal Psychology, Mental Hygiene, etc.)
- Management* (Production Management, Production and Quality Control, Executive Practices, Problems in Business Finance, Applied Economic Analysis, Small Business Operations, Investment Management, Office Management, Seminar: Management Planning, Quantitative Decision-Making.)
- Marketing* (Market Research, Marketing and Sales Analysis, Retail Merchandising, Advertising, Industrial Marketing.)

Mathematical Economics (Mathematical Statistics I and II, Econometrics, Mathematical Economics, Operations Research I and II.)

Advanced Business Economics (Applied Economic Analysis, Location of Business and Industrial Activity, Problems in Business Finance, Business Cycles, Business and Public Policy, Econometrics, Mathematics for Economists, Investment Management.)

Hospital Administration (See separate description below.)

As a climax to his program, the candidate must include the conference-type seminar, BA 299, which assists him to marshal his knowledge of the business field in the solution of specific problems. Hospital Administration students may substitute BA 239 for 299.

Quantitative Requirements

A minimum of thirty graduate hours is required for the degree of Master of Business Administration. These shall ordinarily be distributed as follows:

1. Twelve credit hours in the four general surveys.
2. At least nine credit hours in the area of concentration.
3. BA 299: Seminar: Business Administration Problems, three credit hours.
4. The remainder, electives.

Qualitative Requirements

The degree of Master of Business Administration will be awarded only to candidates who have passed a written comprehensive examination on the general field as covered by the four survey courses and the individual's area of concentration. Students whose undergraduate work did not include at least twelve hours of philosophy must elect one course offered by that department. This course may be included in the required thirty hours for the M.B.A. degree.

THE MASTER OF BUSINESS ADMINISTRATION— HOSPITAL ADMINISTRATION

The degree of Master of Business Administration with a concentration in Hospital Administration is awarded the candidate who has followed a program of studies designed to give him a background in two areas: first, in the principles and techniques used in the administration of businesses in general; and second, in those principles and techniques particularly applicable to the administration of hospitals.

Program

To accomplish the first objective, the candidate must include in his program the following three courses required of all students for the degree of Master of Business Administration, irrespective of their concentration:

- BA 201. **ECONOMICS OF BUSINESS.** Three credit hours. Introduction to major areas of economics judged most useful to the business executive. Functions of the economic system; national income; business cycles, forecasting, government economics; finance.
- BA 202. **QUANTITATIVE BUSINESS METHODS.** Three credit hours. Application of quantitative methods to the solution of recurring business problems. Basic mathematical models: breakeven, forecasting, linear programming, probability, scheduling, transportation, and waiting line.
- BA 204. **ADMINISTRATIVE OPERATION.** Three credit hours. Techniques of planning, organizing, and control in business. Environmental factors; dynamics of human relations; functions; structure.
- BA 209. **RESEARCH IN BUSINESS.** Three credit hours. Understanding and skills necessary to the intelligent use of research in business. In this course two credit hours are devoted to research techniques and procedures. The remaining credit hour is awarded on completion of an actual research project in hospital administration. A separate grade is given for each phase of the course.

To accomplish the second objective, the candidate must include courses designed to acquaint him specifically with the field of hospital administration. The following courses, constituting two-thirds of his program, are designed as six individual three credit-hour courses during the academic year, but are organized as three six-hour workshops during summer sessions:

Academic Year

- BA 230. Hospital Organization and Administration:
Principles 3 cr. hrs.
- BA 231. Hospital Organization and Administration:
Cases 3 cr. hrs.

(In summer these are organized as:

- BA 232. Workshop: Hospital Organization and
Administration 6 cr. hrs.)
- BA 233. Hospital Financial Management 3 cr. hrs.
- BA 234. Procurement and Purchasing in Hospitals 3 cr. hrs.

(In summer these are organized as:

BA 235. Workshop: Hospital Business Management.....6 cr. hrs.)

BA 236. Hospital Personnel Administration.....3 cr. hrs.

BA 237. Seminar: Hospital Administration Problems.....3 cr. hrs.

(In summer these are organized as:

BA 238. Workshop: Personnel Administration and Hospital Problems.....6 cr. hrs.)

Residency

Before receiving the degree of Master of Business Administration with concentration in Hospital Administration, all students must complete an eight-month administrative residency in a hospital, unless specifically exempted in writing by the Director of the Hospital Administration program. Exception will be made only when the student evidences equivalent experience prior to enrolling in the degree program. While a student will ordinarily receive compensation from the hospital in which he serves his residency, a residency fee of \$200 is charged by the University to cover expenses of University administration of the program. Transcripts of students completing residency will carry a brief certification as to his residency.

Quantitative Requirements

A minimum of thirty graduate hours plus the completion of the residency requirement is required for the degree of Master of Business Administration. These shall ordinarily be distributed as follows:

1. Nine credit hours in three general surveys.
2. At least eighteen credit hours in the area of hospital administration, exclusive of Hospital Accounting or Basic Economics.
3. The remainder, electives.

Qualitative Requirements

The degree of Master of Business Administration will be awarded only to candidates who have passed a written comprehensive examination on the general field as covered by the three survey courses and the individual's area of concentration.

Undergraduate Prerequisites

Students may be admitted to graduate degree work in hospital administration on either of the two following bases:

1. Undergraduate degree which includes at least thirty hours of study in business subjects including Principles of Accounting, 6 credit hours, and Principles of Economics, 6 credit hours.
2. Undergraduate degree, at least two full years of hospital or general business experience, and courses in Principles of Accounting, 6 credit hours, and Principles of Economics, 6 credit hours. Deficiencies in these two requirements may be removed by completing BA 200a: Basic Accounting and BA 200b: Basic Economics, special courses covering these areas.

Eligibility for Enrollment

Applicants for advanced study in the field of Hospital Administration must be well-qualified in terms of educational background, personal traits, motivation, abilities, and interest in the field.

Selection of applicants meeting the above criteria will be based on the potential benefits that the individual will receive from the program as indicated by his background, service to the profession, and academic prerequisites. Personal interviews with the director of the program are recommended for all applicants where this is feasible.

GENERAL REGULATIONS

Admission

Application for admission to graduate studies is made in form. Application forms can be had on request. Applications should be followed promptly by a transcript of applicant's credits.

Students electing graduate work leading to a master's degree must present evidence of having a bachelor's degree from an accredited institution, and also present official transcripts of his record from each college in which credit was obtained. Others will be registered conditionally.

An applicant with a bachelor's degree from a non-accredited institution is not admitted to full graduate standing until he has successfully completed at least six hours of graduate work with the required grades, and has been accepted by the department which controls his program.

Since graduate work is work done under direction, the Chairman of the Department of the student's major subject must decide on the student's preparation for graduate study in that department; and the Chairman or one appointed by him will be the student's adviser throughout. The general prerequisites for graduate work in any department must be the equivalent of an undergraduate major at Xavier University.

Seniors of satisfactory academic standing who are within nine hours of completing their undergraduate requirements for the bachelors' degree may, in their last semester, register for graduate work.

Dismissal

The Graduate School reserves the right to dismiss from any graduate degree program any student whose quality of classwork is beneath the standard set by the Graduate Council of the University.

Miller Analogies Test

All applicants for admission to the Graduate School will be required to take the Miller Analogies Test at Xavier University, or to bring with them an official report of their scores. Scores will aid the faculty in the guidance of the student.

Candidacy

Candidacy shall begin when, after the student's completion of six hours of graduate work, his application shall have been passed by the graduate council. Every student must make such application after completing six hours of work at Xavier and those thought unfit will be advised to discontinue their course.

No more than five years may elapse between candidacy and completion of work for the degree.

A student who attends only summer sessions may be granted a graduate degree provided he is engaged in work related to his major subject. This supposes that no more than five years shall elapse between his candidacy and the completion of his work.

Requirements

Thirty semester hours of graduate work will be demanded of an applicant for any of the above degrees. In the case of applicants for a Master of Arts or Master of Science degree, twenty-four hours of such work will be devoted to fulfilling the course requirements and six hours to fulfilling the thesis requirement. Applicants for the Master of Education or Master of Business Administration degrees will devote the thirty hours to course requirements, as will applicants for the Master of Science in mathematics under Plan B.

Students will be allowed to transfer no more than six graduate credits from other institutions, provided such work was not taken in an extension center.

For degrees requiring a thesis, familiarity with at least one foreign language is required for cultural background and use in research.

Distribution of the course requirements must be approved by the Chairman of the Department of the major subject. At least one-half of the courses taken must be fulfilled in that department. Candidates, however, for the Master of Arts and Master of Science degrees are advised to take all their work in their major department.

Character of the courses required is subject to the decision of the adviser. At least one-half the hours of credit in the major subject and one-half the total number of hours toward the degree must be obtained in courses numbered 200 or above, which are distinctly graduate courses.

Examinations and Marking

The candidates for graduate degrees shall be required to pass an oral examination. It shall be the policy of the Graduate School to give these examinations within three weeks of the end of the final semester. The head of the major department or one appointed by him shall be chairman of the examining committee and shall be responsible for the giving of the examination. The student must pass such other oral or written examinations as are required by his major department. A written examination may be required by the Departments of Education, Business, English, and Physics instead of the final oral.

The matter for the examination shall be based primarily on the student's courses and, if he is a candidate for the Master of Arts or Master of Science degree, on his thesis. It is understood, however, that a candidate's general knowledge of his field must be found satisfactory by his examiners.

The thesis required for the Master of Arts or Master of Science degree should embody the results of the applicant's research in some problem of his major subject, and must at each stage be under the direction of the Chairman of the Department of that subject or of one appointed by him.

The student must submit three typed copies of his thesis after it has been formally approved.

The following symbols are used in the evaluation of course work: A — indicative not only of high achievement, but also of an unusual degree of intellectual ability and initiative; B — above average attainment; C — work of minimum or average attainment; D — inferior, no graduate credit; F — failure. To obtain credit graduate students must do work of B quality in courses numbered 100 to 199, and of C quality in courses numbered 200 or higher.

Scholarships: Graduate School

Xavier University annually offers scholarships in all departments in which graduate programs are offered. These departments are

business administration, classics, chemistry, education, English, history and political science, mathematics, philosophy, and psychology. Two scholarships may be awarded in each department by the Graduate Scholarship Committee on recommendation of the Chairman of the Department concerned. Scholarships will be awarded only to those who have demonstrated real academic excellence in their undergraduate work. Scholarships cover tuition only and are valued at \$960 each.

Awards will be subject to the following requirements and procedures:

1. Scholarships will be awarded only to students prepared to do full-time graduate study with the exception that partial scholarships may be awarded in classics.
2. Only students who meet fully departmental requirements as outlined in the University Catalogue should apply.
3. Applications should be made by letter addressed to the Dean of the Graduate School, Xavier University.
4. Transcripts of all previous college work should be forwarded to the Dean of the Graduate School (one from each college attended).
5. At least two letters from educators who can evaluate the academic qualifications of the applicant should be forwarded directly to the Dean of the Graduate School by the writers.
6. Applications, letters, and transcripts for scholarships must be in the Graduate Office not later than April 1 and applicants will be notified of the decision of the Graduate Scholarship Committee during May of the academic year prior to the award.

Assistantships

The Walter A. and George McDonald Fund, established in honor of Mr. and Mrs. Andrew J. McDonald, provides income from a gift of \$50,000 for a graduate assistant in the Department of Chemistry.

A limited number of other graduate assistantships is awarded annually in the Departments of Chemistry, History, Mathematics, and Psychology. Assistants are expected to devote half-time to graduate studies and half-time to service in the department.

Letters of application should be addressed to the Chairman of the Department concerned. A complete transcript of the applicant's undergraduate record and letters of recommendation from the chairman of the applicant's undergraduate department and one other professor should be sent directly to the Chairman of the Department concerned at Xavier University.

All letters of application, recommendation, and transcripts should be in the hands of the chairman concerned not later than April 1, and successful applicants will be notified during May by the chairman concerned.

Lichter Foundation and Defense Act Loan Funds

Graduate students are eligible to participate in the Lichter Foundation Loan Fund after their first semester of residence. Amounts of loans from these funds are determined by the Committee on Scholarships on an individual basis.

Tuition and Fees

Matriculation (payable once)	\$10.00
Tuition (per credit hour—graduate)	32.00
Teachers and school administrators receive a special rate of	25.00
Science fee (per course per semester)	10.00
Science deposit (per course per semester—partially refundable)	10.00
Laboratory materials deposit for science thesis (payable once—partially refundable)	50.00
Miller Analogies Test	3.00
Binding of thesis	4.00
Graduation fee	25.00

Contingent Fees

Special Examination	\$5.00
Duplicate Transcript	1.00

All accounts must be settled on the day of registration. Attendance at classes will not be permitted until financial arrangements have been made with the bursar.

A \$3.00 service charge will be added to all accounts over \$250.00, and a \$1.00 service charge will be added to all other accounts.

This service charge will be deducted if full payment is made within one month of the first day of class in a given semester.

Withdrawal

Withdrawal from a course should be reported at once to the Dean of Graduate School by the student, in person or in writing. The date on which a withdrawal is reported to the Graduate Office

by the student is the date used to determine possible refunds of tuition.

Refunds

The following is the official interpretation of University refund policy as applied to students of the Graduate School:

1. A refund of *tuition* (fees are not refundable) may be claimed in the case of withdrawal or dismissal in the first weeks of a semester according to the schedule detailed below.
2. Computation of refunds will be based upon the *official date of withdrawal*, not the last class attended.
3. The official date of withdrawal is the date upon which the student notifies the Graduate Office of his withdrawal, preferably in writing.
4. Withdrawal of a student who has been permitted to make only a partial payment at registration is handled precisely as it would have been had he completed payment; *thus he may owe a balance even though he has withdrawn.*

Schedule of Refunds, Academic Year

	<i>Refund</i>
Before student's first class meets	100%
In first or second week from first day of semester	90%
In third or fourth week from first day of semester	80%
In fifth or sixth week from first day of semester	60%
In seventh or eighth week from first day of semester	40%
In ninth week from first day of semester	20%
After nine weeks from first day of semester	None

Schedule of Refunds, Summer Sessions

For summer refund schedule, substitute "day" for "week" in the schedule for the academic year.

Chronicle

Presidents

<i>Year</i>	<i>President</i>	<i>Year</i>	<i>President</i>
1831-34	Rev. James I. Mullan.	1881-84	Rev. John I. Coghlan, S.J.
1834-40	Most Rev. John Baptist Purcell.	1884-85	Rev. Henry Moeller, S.J.
1840-47	Rev. J. A. Elet, S.J.	1885-87	Rev. Edward A. Higgins, S.J.
1847-48	Rev. J. E. Blox, S.J.	1887-93	Rev. Henry Schapman, S.J.
1848-51	Rev. J. De Blieck, S.J.	1893-96	Rev. A. J. Burrowes, S.J.
1851-53	Rev. George A. Carrell, S.J.	1896-1900	Rev. Michael J. O'Connor, S.J.
1853-56	Rev. I. Boudreaux, S.J.	1900-07	Rev. Albert A. Dierckes, S.J.
1856-61	Rev. M. Oakley, S.J.	1907-11	Rev. Joseph Grimmelsman, S.J.
1861-65	Rev. John Schultz, S.J.	1911-16	Rev. Francis Heiermann, S.J.
1865-69	Rev. W. H. Hill, S.J.	1916-22	Rev. James McCabe, S.J.
1869-71	Rev. Thomas O'Neil, S.J.	1922-30	Rev. Hubert F. Brockman, S.J.
1871-74	Rev. Leopold Bushart, S.J.	1930-34	Rev. Hugo F. Slocemyer, S.J.
1874-78	Rev. Edward A. Higgins, S.J.	1934-40	Rev. Dennis F. Burns, S.J.
1878-79	Rev. Thomas O'Neil, S.J.	1940-49	Rev. Celestin J. Steiner, S.J.
1879-81	Rev. R. J. Meyer, S.J.	1949-55	Rev. James F. Maguire, S.J.
1955-	Rev. Paul L. O'Connor, S.J.		

Intercollegiate English Essay Contest, 1965

Gordon Anthony Lang, First Place

The Washington Oratorical Medal, Gift of the Alumni Association, 1965

Charles Francis Penner

The Verkamp Debate Medal, Founded by Joseph B. Verkamp, '77, 1965

Robert Thomas Joseph

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Wills and Bequests

Through the years, friends of Xavier University, by designating the University in their last wills, have expressed their appreciation for the devoted service and notable contributions made by the University.

Through a will, a friend of Xavier University can provide that the causes and ideals he or she has cherished in life will continue to enjoy support.

Gifts to the University may take the form of scholarships, of professorships, of additions to the material equipment, or of contributions to the permanent endowment fund. Special conditions may, of course, be attached to any gift.

Listed below is a Bequest Form which may be used to designate Xavier University in your will.

FORM OF BEQUEST

I, _____ hereby give, bequeath and devise to Xavier University, an institution incorporated under the laws of the State of Ohio, and located in Cincinnati, Ohio, the following:

for the uses and purposes of the said Corporation.

(Signed) _____

(Date) _____

Witnesses:

"It is a bad will that has not the name of Our Lord among the heirs."—*Cardinal Manning*.

